



**IDEAL**

**BOILERS  
RADIATORS  
ACCESSORIES**

**1938**



K.F. BAWDEN







BY APPOINTMENT

# IDEAL

## BOILERS      RADIATORS

### ACCESSORIES



## IDEAL BOILERS & RADIATORS

LIMITED

Offices, Showrooms, & Works: HULL, Yorks.  
 Telephone: Hull Central 15020.      Telegrams: Radiators Hull.

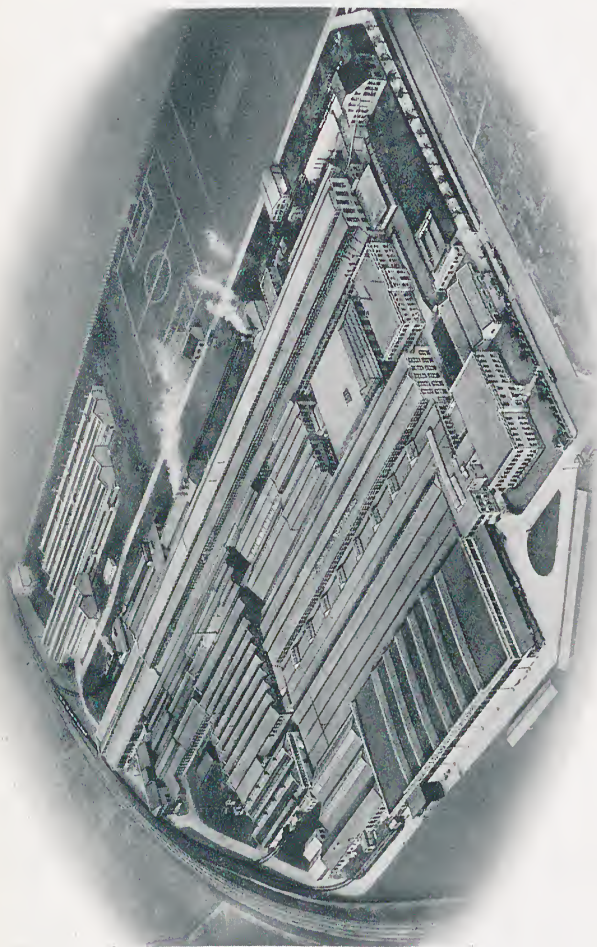
**Showrooms:**  
 London: Ideal House, Gt. Marlborough St., W.1.  
 Birmingham: 35 Paradise Street.

**Telephone:**      **Telegrams:**  
 Gerrard 8686.      Idealrad  
 Midland 1426.      Idealrad

**Warehouses:**  
 London: Palace of Engineering, Wembley.  
 Bristol: G.W.R., Canons Marsh, 1.  
 Birmingham: 35 Paradise Street.  
 Manchester: L.N.E.R., Dulcie St., Piccadilly.  
 Glasgow: 81 Dobbies Loan, C.4.

Wembley 4321.      Idealrad  
 Bristol 23409.      Idealrad  
 Midland 1426.      Idealrad  
 Central 0836.      Idealrad  
 Douglas 349.      Idealrad

Also New York, Paris, Brussels, Berlin, Amsterdam, Milan,  
 Vienna, and Zoug.



Ideal Works, HULL, Yorks.

Area—54 Acres

THIS new Catalogue contains particulars and illustrations of all current Ideal Boilers and Ideal Radiators, including certain new designs which have been introduced since the previous edition was published.

All Ideal Boilers and Radiators are subjected to a hydrostatic test pressure of 100 lb. per sq. inch, and are guaranteed only to the extent of furnishing new parts for any found defective in manufacture. No claim can be admitted (whether goods are accepted or not) for any other claims, charges, or expenses, or for consequential damages. The above guarantee is given in substitution for all other conditions or warranties, whether expressed or implied by the Sale of Goods Act 1893, or otherwise.

Our laboratory at Hull Works is equipped with the most modern recording instruments, enabling rigid and accurate tests to be made, which, combined with the use of best materials and manufacturing methods, ensure the utmost efficiency and reliability in Ideal heating appliances.

**IDEAL BOILERS & RADIATORS**  
LIMITED

HULL, January 1938.

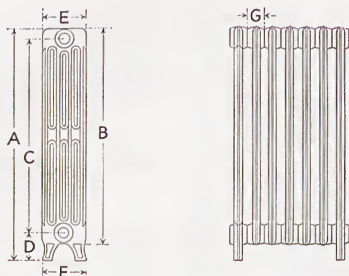
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# DIMENSIONS OF IDEAL RADIATORS

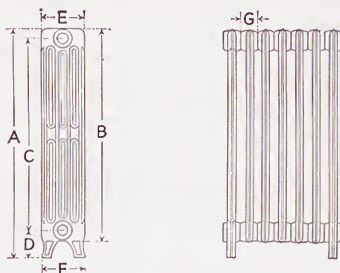


Pattern	Dimensions in Inches							Heating Surface per Sect.	Water Capacity per Sect.
	A	B	C	D	E	F	G*	Sq. ft.	lb.
Neo-Classic No. 2	30	27 $\frac{15}{16}$	25 $\frac{19}{32}$	3 $\frac{1}{8}$	2 $\frac{5}{8}$	2 $\frac{5}{8}$	2	1 $\frac{1}{3}$	.83
	24	22 $\frac{1}{32}$	19 $\frac{11}{16}$					1	.57
	18	16 $\frac{1}{8}$	13 $\frac{25}{32}$					$\frac{3}{4}$	.44
Neo-Classic No. 4	36	34 $\frac{5}{16}$	13 $\frac{1}{2}$	3 $\frac{1}{2}$	5 $\frac{5}{8}$	5 $\frac{5}{8}$	2 $\frac{1}{4}$	3 $\frac{1}{8}$	2.20
	30	28 $\frac{13}{32}$	25 $\frac{19}{32}$					2 $\frac{3}{8}$	1.88
	24	22 $\frac{1}{32}$	19 $\frac{11}{16}$	3 $\frac{1}{8}$	5 $\frac{5}{8}$	5 $\frac{5}{8}$	2	2	1.10
	18	16 $\frac{1}{8}$	13 $\frac{25}{32}$					1 $\frac{2}{5}$	.91
Neo-Classic No. 6	36	34 $\frac{5}{16}$	31 $\frac{1}{2}$	3 $\frac{1}{2}$	8 $\frac{5}{8}$	8 $\frac{5}{8}$	2 $\frac{1}{4}$	5	3.30
	30	28 $\frac{13}{32}$	25 $\frac{19}{32}$					4 $\frac{1}{10}$	2.78
	24	22 $\frac{1}{32}$	19 $\frac{11}{16}$	3 $\frac{1}{8}$	8 $\frac{5}{8}$	8 $\frac{5}{8}$	2	3	1.68
	18	16 $\frac{1}{8}$	13 $\frac{25}{32}$					2 $\frac{1}{10}$	1.31
	13	11 $\frac{3}{8}$	8 $\frac{9}{16}$	3				1 $\frac{3}{5}$	1.25
Neo-Hospital 3-in.	30	27 $\frac{7}{16}$	24 $\frac{9}{16}$	4	3	3	2	1 $\frac{3}{10}$	1.51
	24	21 $\frac{7}{16}$	18 $\frac{9}{16}$					1	1.20
	18	15 $\frac{7}{16}$	12 $\frac{9}{16}$					$\frac{3}{4}$	.85
Neo-Hospital 5 $\frac{3}{4}$ -in.	36	33 $\frac{3}{8}$	30 $\frac{9}{16}$	4	5 $\frac{3}{4}$	5 $\frac{3}{4}$	2 $\frac{5}{8}$	3	4.56
	30	27 $\frac{3}{8}$	24 $\frac{9}{16}$					2 $\frac{1}{2}$	3.75
	24	21 $\frac{3}{8}$	18 $\frac{9}{16}$					2	2.94
	18	15 $\frac{3}{8}$	12 $\frac{9}{16}$					1 $\frac{1}{2}$	2.13
Neo-Hospital 7 $\frac{1}{4}$ -in.	36	33 $\frac{5}{16}$	30 $\frac{9}{16}$	4	7 $\frac{1}{4}$	7 $\frac{1}{4}$	2 $\frac{5}{8}$	3 $\frac{7}{10}$	6.33
	30	27 $\frac{5}{16}$	24 $\frac{9}{16}$					3 $\frac{1}{10}$	5.18
	24	21 $\frac{5}{16}$	18 $\frac{9}{16}$					2 $\frac{1}{2}$	4.03
	18	15 $\frac{5}{16}$	12 $\frac{9}{16}$					1 $\frac{9}{10}$	2.88

\* End sections : Neo-Classic Nos. 2, 4 & 6,  $\frac{1}{16}$  in. less ; Neo-Hospital, three widths,  $\frac{1}{8}$  in. less.



# DIMENSIONS OF IDEAL RADIATORS



Pattern	Dimensions in Inches							Heating Surface per Sect.	Water Capacity per Sect.	
	A	B	C	D	E	F	G*	Sq. ft.	lb.	
Neo-Classic Window	13	11 $\frac{3}{8}$	8 $\frac{9}{16}$	3	13 $\frac{1}{8}$	13 $\frac{1}{8}$	2 $\frac{1}{4}$	2 $\frac{1}{2}$	2.35	
Classic Wall	30	See page 25							8 $\frac{1}{4}$	5.39
	24								6 $\frac{3}{8}$	4.84
	18								5	3.74
Rayrad Nos. 35, 36 & 36A	30	See pages 30 & 31							—	1.50
	24								—	1.35
	18								—	1.20
	12								—	1.00
Rayrad No. 15	30	See page 34							—	2.40
	24								—	2.15
	18								—	1.90
Rayrad No. 24	30	See page 37							14 $\frac{1}{2}$	10.00
	24								11 $\frac{1}{2}$	7.92
	18								8 $\frac{1}{2}$	6.25
Vento ..	41	—	—	—	9 $\frac{1}{8}$	—	5†	10 $\frac{3}{4}$	17.50	
Excelsior	36 $\frac{3}{4}$	—	—	—	8	—	3 $\frac{7}{8}$ †	12	6.00	
Ideal Wall (Plain)	22	See page 26							7 $\frac{1}{4}$	11.25
	13								7 $\frac{1}{2}$	11.65
Marine ..	23 $\frac{3}{8}$	See page 47							4	2.65

\* End sections : Neo-Classic Window,  $\frac{1}{16}$  in. less.

† With regular nipples.

# IDEAL RADIATORS

## Nipple Connections and Tappings

Style of Radiator	Nipple Connections			Tappings*			
	Nominal Size, ins.		Standard of Threads	Kind of Section	Inside Threads	Maximum Size, ins.	
	Top	Btm.				Top	Btm.
Neo-Classic No. 2	1	1	R. & L. pipe	Supply Return	R.H. pipe L.H. "	1 1	1 1
Neo-Classic Nos. 4 & 6 18 & 24-in.	1	1	" "	Supply Return	R.H. " L.H. "	1 1	1 1
30 & 36-in. & No. 6, 13-in.	1 $\frac{1}{4}$	1 $\frac{1}{4}$	" "	Supply Return	R.H. " L.H. "	1 $\frac{1}{4}$ 1 $\frac{1}{4}$	1 $\frac{1}{4}$ 1 $\frac{1}{4}$
Neo-Hospital 3-in. width	1	1	" "	Supply Return	R.H. " L.H. "	1 1	1 1
5 $\frac{3}{4}$ -in. & 7 $\frac{1}{4}$ -in. widths	1 $\frac{1}{4}$	1 $\frac{1}{4}$	" "	Supply Return	R.H. " L.H. "	1 $\frac{1}{4}$ 1 $\frac{1}{4}$	1 $\frac{1}{4}$ 1 $\frac{1}{4}$
Neo-Classic Window	1 $\frac{1}{4}$	1 $\frac{1}{4}$	" "	Supply Return	R.H. " L.H. "	1 $\frac{1}{4}$ 1 $\frac{1}{4}$	1 $\frac{1}{4}$ 1 $\frac{1}{4}$
Classic Wall	1	1	" "	Supply Return	L.H. " R.H. "	1 1	1 1
Plain Wall	1 $\frac{1}{2}$	1 $\frac{1}{2}$	† " "	—	—	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Ideal Rayrad No. 15	1	1	" "	Supply Return	L.H. " R.H. "	1 1	1 1
No. 24	1	1	‡ " "	—	—	1	1
Nos. 35, 36 & 36A	$\frac{3}{4}$	$\frac{3}{4}$	" "	Supply Return	R.H. " L.H. "	$\frac{3}{4}$ $\frac{3}{4}$	$\frac{3}{4}$ $\frac{3}{4}$
Marine Bulk- head	1	1	† " "	—	—	1	1
Excelsior ..	1 $\frac{1}{2}$	1 $\frac{1}{2}$	† " "	—	—	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Vento ..	2 $\frac{1}{2}$	2 $\frac{1}{2}$	† " "	—	—	2 $\frac{1}{2}$	2 $\frac{1}{2}$

\* The outside tappings of these sections are R.H. pipe thread.

† Suitable left-hand plugs and bushings are supplied.

‡ Suitable left-hand plugs and bushings are supplied. 1-in. right-hand tappings can be provided to order.

**Size and position of tappings should be stated on order.**

All radiator sections are assembled with internal nipples, except Excelsior and Vento, which are connected together with hexagon nipples.



# ASSEMBLING OF RADIATOR SECTIONS

## DIRECT RADIATORS

**To Break Apart.**—The airvent is situated on return section ; therefore, when breaking apart from return end the bar wrench must be turned to the left, except in the case of Classic Wall, when the wrench must be turned to the right. Chalk-mark bar wrench to ensure breaking apart at the required joint.

**To Assemble.**—Thoroughly clean the thread of nipple and section. Paint the tapping in section with graphite mixed with water to the consistency of paint.

After placing a gasket on the top and bottom nipples, start the right-hand thread of each one full turn into the radiator section before allowing the left-hand thread of nipple to enter the adjoining section. Screw the nipple in with a suitable bar wrench (a short length of bar iron flattened at one end to engage the nipple lugs). Be sure the left-hand thread enters immediately, so that the right-hand has a lead of only one thread. Ideal Radiator nipples are one thread longer on the right than on the left hand, to accommodate this lead, ensuring equal tension. The right-hand thread is always on that half of nipple which has the assembling lug flush with edge.

When the top and bottom nipples are properly started in the sections, use a short key wrench and screw up the nipples evenly, keeping equal distances at top and bottom. Use a longer wrench for the last few threads, until the sections press hard on the gasket.

A 3-foot key wrench should suffice to complete assembling, and these, as well as proper bar wrenches, can be obtained on loan or purchased from Hull Works by the trade. The work is facilitated if the radiator can be clamped down in some way after the nipples have been started.

The internal nipples for Ideal Radiators are of malleable iron, and preferably should not be used a second time, owing to compression, or reduction in diameter, having taken place in the first assembling.

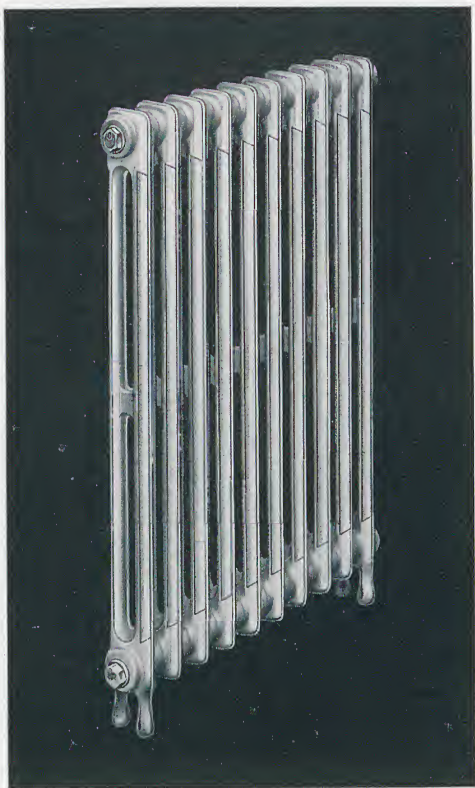
## INDIRECT RADIATORS

**To Assemble**—The foregoing instructions equally apply, except for the obvious difference in manipulating the internal nipples used with direct radiators and the external nipples with hexagon nut at centre used for the indirect type. The lead of one thread on right-hand side is a very important detail. By means of the hexagon the nipple can be turned in by hand for the first few threads, and this will be found more convenient than the use of a spanner.

## No. 2 IDEAL NEO-CLASSIC RADIATOR

Width— $2\frac{5}{8}$  ins.

For Water or Steam



Can be supplied without feet. Wall Brackets, pages 49 and 50.

Fitted with Ideal Vent Plug, page 184.

Dimensions and Tappings, pages 6 and 8.

## No. 2 IDEAL NEO-CLASSIC RADIATOR

Width—2 $\frac{5}{8}$  ins.

For Water or Steam

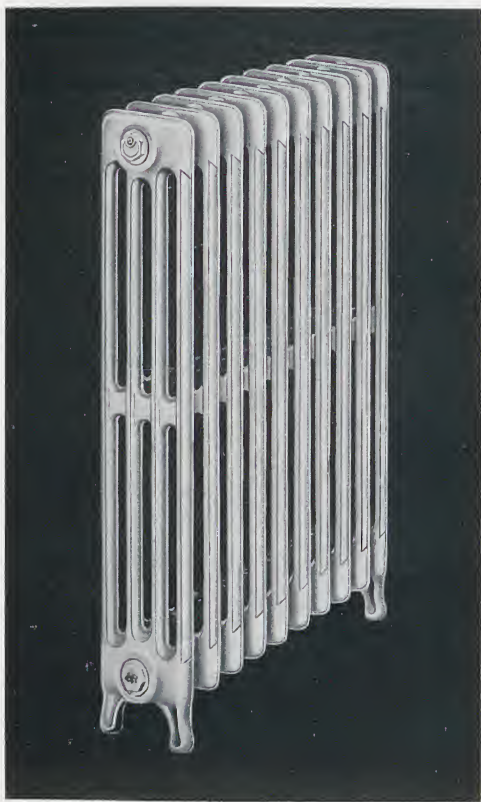
Number of Sections	*Length in Inches	30 ins. high 1 $\frac{1}{2}$ sq. ft. per Section		24 ins. high 1 sq. ft. per Section		18 ins. high $\frac{3}{4}$ sq. ft. per Section	
		Heating Surface	PRICE	Heating Surface	PRICE	Heating Surface	PRICE
		Sq. ft.	£ s. d.	Sq. ft.	£ s. d.	Sq. ft.	£ s. d.
3	5 $\frac{7}{8}$	4	7 7	3	5 11	2 $\frac{1}{4}$	4 8
4	7 $\frac{7}{8}$	5 $\frac{1}{3}$	10 2	4	7 11	3	6 3
5	9 $\frac{7}{8}$	6 $\frac{2}{3}$	12 8	5	9 11	3 $\frac{3}{4}$	7 10
6	11 $\frac{7}{8}$	8	15 2	6	11 11	4 $\frac{1}{2}$	9 5
7	13 $\frac{7}{8}$	9 $\frac{1}{3}$	17 9	7	13 10	5 $\frac{1}{4}$	10 11
8	15 $\frac{7}{8}$	10 $\frac{2}{3}$	1 0 3	8	15 10	6	12 6
9	17 $\frac{7}{8}$	12	1 2 10	9	17 10	6 $\frac{3}{4}$	14 1
10	19 $\frac{7}{8}$	13 $\frac{1}{3}$	1 5 4	10	19 10	7 $\frac{1}{2}$	15 8
11	21 $\frac{7}{8}$	14 $\frac{2}{3}$	1 7 11	11	1 1 9	8 $\frac{1}{4}$	17 2
12	23 $\frac{7}{8}$	16	1 10 5	12	1 3 9	9	18 9
13	25 $\frac{7}{8}$	17 $\frac{1}{3}$	1 12 11	13	1 5 9	9 $\frac{3}{4}$	1 0 4
14	27 $\frac{7}{8}$	18 $\frac{2}{3}$	1 15 6	14	1 7 9	10 $\frac{1}{2}$	1 1 11
15	29 $\frac{7}{8}$	20	1 18 0	15	1 9 8	11 $\frac{1}{4}$	1 3 5
16	31 $\frac{7}{8}$	21 $\frac{1}{3}$	2 0 7	16	1 11 8	12	1 5 0
17	33 $\frac{7}{8}$	22 $\frac{2}{3}$	2 3 1	17	1 13 8	12 $\frac{3}{4}$	1 6 7
18	35 $\frac{7}{8}$	24	2 5 7	18	1 15 8	13 $\frac{1}{2}$	1 8 2
19	37 $\frac{7}{8}$	25 $\frac{1}{3}$	2 8 2	19	1 17 7	14 $\frac{1}{4}$	1 9 8
20	39 $\frac{7}{8}$	26 $\frac{2}{3}$	2 10 8	20	1 19 7	15	1 11 3
21	41 $\frac{7}{8}$	28	2 13 3	21	2 1 7	15 $\frac{3}{4}$	1 12 10
22	43 $\frac{7}{8}$	29 $\frac{1}{3}$	2 15 9	22	2 3 7	16 $\frac{1}{2}$	1 14 5
23	45 $\frac{7}{8}$	30 $\frac{2}{3}$	2 18 4	23	2 5 6	17 $\frac{1}{4}$	1 15 11
24	47 $\frac{7}{8}$	32	3 0 10	24	2 7 6	18	1 17 6
25	49 $\frac{7}{8}$	33 $\frac{1}{3}$	3 3 4	25	2 9 6	18 $\frac{3}{4}$	1 19 1
26	51 $\frac{7}{8}$	34 $\frac{2}{3}$	3 5 11	26	2 11 6	19 $\frac{1}{2}$	2 0 8
27	53 $\frac{7}{8}$	36	3 8 5	27	2 13 5	20 $\frac{1}{4}$	2 2 2
28	55 $\frac{7}{8}$	37 $\frac{1}{3}$	3 11 0	28	2 15 5	21	2 3 9
29	57 $\frac{7}{8}$	38 $\frac{2}{3}$	3 13 6	29	2 17 5	21 $\frac{3}{4}$	2 5 4
30	59 $\frac{7}{8}$	40	3 16 0	30	2 19 5	22 $\frac{1}{2}$	2 6 11

\* In estimating length of Radiator, allow 1 in. for bushings and plugs.

## No. 4 IDEAL NEO-CLASSIC RADIATOR

Width— $5\frac{5}{8}$  ins.

For Water or Steam



Can be supplied without feet. Wall Brackets, pages 49 and 50.

Fitted with Ideal Vent Plug, page 184.

Solid high legs to give 6-in. or 8-in. centres, page 53.

Dimensions and Tappings, pages 6 and 8.

## No. 4 IDEAL NEO-CLASSIC RADIATOR

Width—5 $\frac{5}{8}$  ins.

For Water or Steam

Number of Sections	*Length in Inches	36 ins. high 3 $\frac{1}{8}$ sq. ft. per Section			30 ins. high 2 $\frac{3}{8}$ sq. ft. per Section				
		Heating Surface Sq. ft.	PRICE			Heating Surface Sq. ft.	PRICE		
			£	s.	d.		£	s.	d.
3	6 $\frac{5}{8}$	9 $\frac{3}{8}$	15	6	7 $\frac{1}{8}$	13	0		
4	8 $\frac{7}{8}$	12 $\frac{1}{8}$	1	0	8	10 $\frac{3}{8}$	17	4	
5	11 $\frac{1}{8}$	16	1	5	10	13	1	1	8
6	13 $\frac{3}{8}$	19 $\frac{1}{8}$	1	11	0	15 $\frac{3}{8}$	1	6	0
7	15 $\frac{5}{8}$	22 $\frac{3}{8}$	1	16	2	18 $\frac{1}{8}$	1	10	4
8	17 $\frac{7}{8}$	25 $\frac{3}{8}$	2	1	4	20 $\frac{1}{8}$	1	14	8
9	20 $\frac{1}{8}$	28 $\frac{1}{8}$	2	6	6	23 $\frac{3}{8}$	1	19	0
10	22 $\frac{3}{8}$	32	2	11	8	26	2	3	4
11	24 $\frac{5}{8}$	35 $\frac{1}{8}$	2	16	10	28 $\frac{3}{8}$	2	7	8
12	26 $\frac{7}{8}$	38 $\frac{3}{8}$	3	2	0	31 $\frac{1}{8}$	2	12	0
13	29 $\frac{1}{8}$	41 $\frac{3}{8}$	3	7	2	33 $\frac{1}{8}$	2	16	4
14	31 $\frac{3}{8}$	44 $\frac{1}{8}$	3	12	4	36 $\frac{3}{8}$	3	0	8
15	33 $\frac{5}{8}$	48	3	17	6	39	3	5	0
16	35 $\frac{7}{8}$	51 $\frac{1}{8}$	4	2	8	41 $\frac{3}{8}$	3	9	4
17	38 $\frac{1}{8}$	54 $\frac{3}{8}$	4	7	10	44 $\frac{1}{8}$	3	13	8
18	40 $\frac{3}{8}$	57 $\frac{3}{8}$	4	13	0	46 $\frac{1}{8}$	3	18	0
19	42 $\frac{5}{8}$	60 $\frac{1}{8}$	4	18	2	49 $\frac{3}{8}$	4	2	4
20	44 $\frac{7}{8}$	64	5	3	4	52	4	6	8

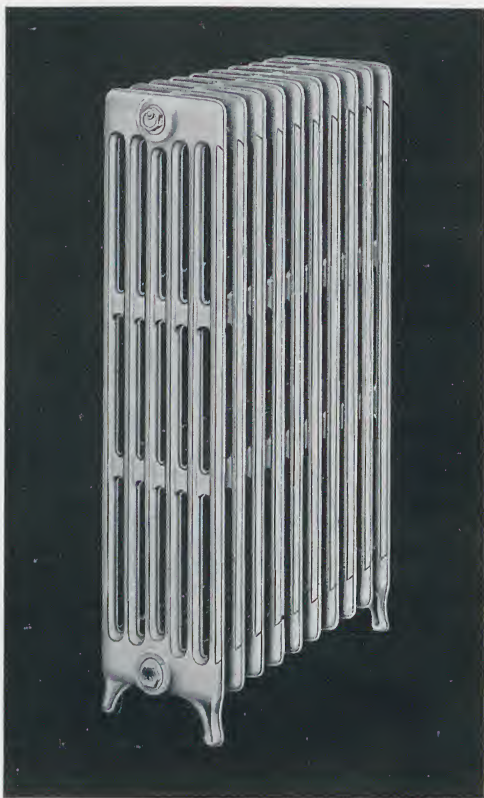
Number of Sections	*Length in Inches	24 ins. high 2 sq. ft. per Section			18 ins. high 1 $\frac{1}{2}$ sq. ft. per Section			
		Heating Surface Sq. ft.	PRICE £ s. d.			Heating Surface Sq. ft.	PRICE £ s. d.	
3	5 $\frac{7}{8}$	6	10	9	4 $\frac{1}{8}$	8	1	
4	7 $\frac{7}{8}$	8	14	4	5 $\frac{3}{8}$	10	10	
5	9 $\frac{7}{8}$	10	18	0	7	13	6	
6	11 $\frac{7}{8}$	12	1	1	7	16	2	
7	13 $\frac{7}{8}$	14	1	5	2	18	11	
8	15 $\frac{7}{8}$	16	1	8	9	1	1	7
9	17 $\frac{7}{8}$	18	1	12	4	1	4	3
10	19 $\frac{7}{8}$	20	1	15	11	1	7	0
11	21 $\frac{7}{8}$	22	1	19	6	1	9	8
12	23 $\frac{7}{8}$	24	2	3	1	1	12	5
13	25 $\frac{7}{8}$	26	2	6	9	1	15	1
14	27 $\frac{7}{8}$	28	2	10	4	1	17	9
15	29 $\frac{7}{8}$	30	2	13	11	2	0	6
16	31 $\frac{7}{8}$	32	2	17	6	2	3	2
17	33 $\frac{7}{8}$	34	3	1	1	2	5	10
18	35 $\frac{7}{8}$	36	3	4	8	2	8	7
19	37 $\frac{7}{8}$	38	3	8	3	2	11	3
20	39 $\frac{7}{8}$	40	3	11	10	2	14	0

\* In estimating length of Radiator, allow 1 in. for bushings and plugs.

## No. 6 IDEAL NEO-CLASSIC RADIATOR

Width— $8\frac{5}{8}$  ins.

For Water or Steam



Can be supplied without feet. Wall Brackets, pages 49 and 50.

Fitted with Ideal Vent Plug, page 184.

Solid high legs to give 6-in. or 8-in. centres, page 53.

Dimensions and Tappings, pages 6 and 8.



## No. 6 IDEAL NEO-CLASSIC RADIATOR

Width—8 $\frac{5}{8}$  ins.

For Water or Steam

Number of Sections	*Length in Inches	36 ins. high 5 sq. ft. per Section			30 ins. high 4 $\frac{1}{10}$ sq. ft. per Section				
		Heating Surface Sq. ft.	PRICE			Heating Surface Sq. ft.	PRICE		
			£	s.	d.		£	s.	d.
3	6 $\frac{5}{8}$	15	1	4	3	12 $\frac{3}{10}$	1	0	6
4	8 $\frac{7}{8}$	20	1	12	4	16 $\frac{2}{5}$	1	7	4
5	11 $\frac{1}{8}$	25	2	0	4	20 $\frac{1}{2}$	1	14	2
6	13 $\frac{3}{8}$	30	2	8	5	24 $\frac{3}{5}$	2	1	0
7	15 $\frac{5}{8}$	35	2	16	6	28 $\frac{7}{10}$	2	7	10
8	17 $\frac{7}{8}$	40	3	4	7	32 $\frac{4}{5}$	2	14	8
9	20 $\frac{1}{8}$	45	3	12	8	36 $\frac{9}{10}$	3	1	6
10	22 $\frac{3}{8}$	50	4	0	9	41	3	8	4
11	24 $\frac{5}{8}$	55	4	8	10	45 $\frac{1}{10}$	3	15	2
12	26 $\frac{7}{8}$	60	4	16	11	49 $\frac{1}{5}$	4	2	0
13	29 $\frac{1}{8}$	65	5	4	11	53 $\frac{3}{10}$	4	8	10
14	31 $\frac{3}{8}$	70	5	13	0	57 $\frac{2}{5}$	4	15	8
15	33 $\frac{5}{8}$	75	6	1	1	61 $\frac{1}{2}$	5	2	6
16	35 $\frac{7}{8}$	80	6	9	2	65 $\frac{3}{5}$	5	9	4
17	38 $\frac{1}{8}$	85	6	17	3	69 $\frac{7}{10}$	5	16	2
18	40 $\frac{3}{8}$	90	7	5	4	73 $\frac{4}{5}$	6	3	0
19	42 $\frac{5}{8}$	95	7	13	5	77 $\frac{9}{10}$	6	9	10
20	44 $\frac{7}{8}$	100	8	1	6	82	6	16	8

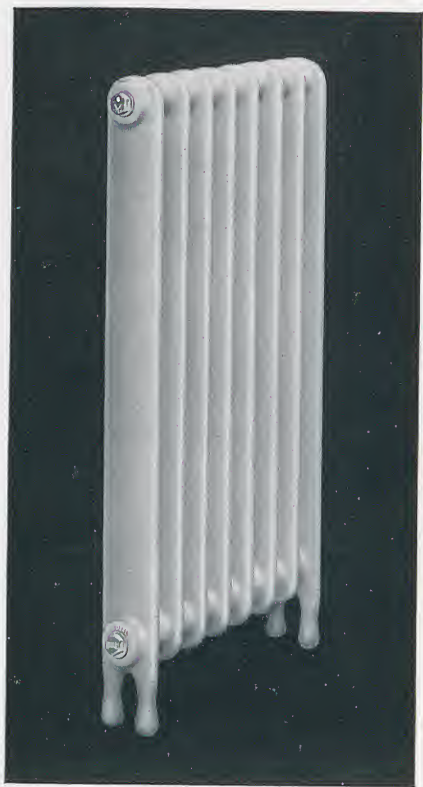
No. of Sections	* Length in Inches	24 ins. high 3 sq. ft. per Section			18 ins. high 2 $\frac{1}{10}$ sq. ft. per Section			13 ins. high 1 $\frac{3}{5}$ sq. ft. per Section					
		Heating Surface Sq. ft.	PRICE			Heating Surface Sq. ft.	PRICE			Heating Surface Sq. ft.	PRICE		
			£	s.	d.		£	s.	d.		£	s.	d.
3	5 $\frac{7}{8}$	9	16	2	6 $\frac{3}{10}$	12	2	4 $\frac{1}{5}$	10	10			
4	7 $\frac{7}{8}$	12	1	1 7	8 $\frac{2}{5}$	16	2	6 $\frac{2}{5}$	14	6			
5	9 $\frac{7}{8}$	15	1	6 11	10 $\frac{1}{2}$	1	0 3	8	18	1			
6	11 $\frac{7}{8}$	18	1	12 4	12 $\frac{3}{5}$	1	4 3	9 $\frac{3}{5}$	1	1 9			
7	13 $\frac{7}{8}$	21	1	17 9	14 $\frac{7}{10}$	1	8 4	11 $\frac{1}{5}$	1	5 4			
8	15 $\frac{7}{8}$	24	2	3 1	16 $\frac{4}{5}$	1	12 4	12 $\frac{4}{5}$	1	9 0			
9	17 $\frac{7}{8}$	27	2	8 6	18 $\frac{9}{10}$	1	16 5	14 $\frac{2}{5}$	1	12 7			
10	19 $\frac{7}{8}$	30	2	13 11	21	2	0 6	16	1	16 3			
11	21 $\frac{7}{8}$	33	2	19 4	23 $\frac{1}{10}$	2	4 6	17 $\frac{3}{5}$	1	19 10			
12	23 $\frac{7}{8}$	36	3	4 8	25 $\frac{1}{5}$	2	8 7	19 $\frac{1}{5}$	2	3 6			
13	25 $\frac{7}{8}$	39	3	10 1	27 $\frac{3}{10}$	2	12 7	20 $\frac{4}{5}$	2	7 1			
14	27 $\frac{7}{8}$	42	3	15 6	29 $\frac{2}{5}$	2	16 8	22 $\frac{2}{5}$	2	10 9			
15	29 $\frac{7}{8}$	45	4	0 10	31 $\frac{1}{2}$	3	0 8	24	2	14 4			
16	31 $\frac{7}{8}$	48	4	6 3	33 $\frac{3}{5}$	3	4 9	25 $\frac{3}{5}$	2	18 0			
17	33 $\frac{7}{8}$	51	4	11 8	35 $\frac{7}{10}$	3	8 10	27 $\frac{1}{5}$	3	1 7			
18	35 $\frac{7}{8}$	54	4	17 0	37 $\frac{4}{5}$	3	12 10	28 $\frac{4}{5}$	3	5 3			
19	37 $\frac{7}{8}$	57	5	2 5	39 $\frac{9}{10}$	3	16 11	30	3	8 10			
20	39 $\frac{7}{8}$	60	5	7 10	42	4	0 11	32	3	12 6			

\* In estimating length of Radiator, allow 1 in. for bushings and plugs.

# IDEAL NEO-HOSPITAL RADIATOR

Width—3 ins.

For Water or Steam



Air space between sections, 1 inch.

Fitted with Ideal Vent Plug, page 184.

Can be supplied without feet. Wall Brackets, pages 22, 49 and 50

Swinging Radiators, page 48.

Dimensions and Tappings, pages 6 and 8.



## IDEAL NEO-HOSPITAL RADIATOR

Width—3 ins.

For Water or Steam

Number of Sections	*Length in Inches	30 ins. high 1 $\frac{3}{10}$ sq. ft. per Section			24 ins. high 1 sq. ft. per Section			18 ins. high $\frac{3}{4}$ sq. ft. per Section					
		Heating Surface	PRICE			Heating Surface	PRICE			Heating Surface	PRICE		
		Sq. ft.	£	s.	d.	Sq. ft.	£	s.	d.	Sq. ft.	£	s.	d.
3	5 $\frac{3}{4}$	3 $\frac{9}{10}$	7	6	3	6	1		2 $\frac{1}{4}$	5	0		
4	7 $\frac{3}{4}$	5 $\frac{1}{5}$	10	0	4	8	2		3	6	9		
5	9 $\frac{3}{4}$	6 $\frac{1}{2}$	12	6	5	10	2		3 $\frac{3}{4}$	8	5		
6	11 $\frac{3}{4}$	7 $\frac{4}{5}$	15	0	6	12	2		4 $\frac{1}{2}$	10	1		
7	13 $\frac{3}{4}$	9 $\frac{1}{10}$	17	6	7	14	3		5 $\frac{1}{4}$	11	9		
8	15 $\frac{3}{4}$	10 $\frac{2}{5}$	1	0	0	8	16	3	6	13	5		
9	17 $\frac{3}{4}$	11 $\frac{7}{10}$	1	2	7	9	18	3	6 $\frac{3}{4}$	15	1		
10	19 $\frac{3}{4}$	13	1	5	1	10	1	0	4	7 $\frac{1}{2}$	16	10	
11	21 $\frac{3}{4}$	14 $\frac{3}{10}$	1	7	7	11	1	2	4	8 $\frac{1}{4}$	18	6	
12	23 $\frac{3}{4}$	15 $\frac{2}{5}$	1	10	1	12	1	4	5	9	1	0	1
13	25 $\frac{3}{4}$	16 $\frac{9}{10}$	1	12	7	13	1	6	5	9 $\frac{3}{4}$	1	1	10
14	27 $\frac{3}{4}$	18 $\frac{1}{5}$	1	15	1	14	1	8	5	10 $\frac{1}{2}$	1	3	6
15	29 $\frac{3}{4}$	19 $\frac{1}{2}$	1	17	7	15	1	10	6	11 $\frac{1}{4}$	1	5	2
16	31 $\frac{3}{4}$	20 $\frac{4}{5}$	2	0	1	16	1	12	6	12	1	6	10
17	33 $\frac{3}{4}$	22 $\frac{1}{10}$	2	2	7	17	1	14	6	12 $\frac{3}{4}$	1	8	7
18	35 $\frac{3}{4}$	23 $\frac{2}{5}$	2	5	1	18	1	16	7	13 $\frac{1}{2}$	1	10	3
19	37 $\frac{3}{4}$	24 $\frac{7}{10}$	2	7	7	19	1	18	7	14 $\frac{1}{4}$	1	11	11
20	39 $\frac{3}{4}$	26	2	10	1	20	2	0	8	15	1	13	7
21	41 $\frac{3}{4}$	27 $\frac{3}{10}$	2	12	7	21	2	2	8	15 $\frac{3}{4}$	1	15	3
22	43 $\frac{3}{4}$	28 $\frac{2}{5}$	2	15	1	22	2	4	8	16 $\frac{1}{2}$	1	16	11
23	45 $\frac{3}{4}$	29 $\frac{9}{10}$	2	17	7	23	2	6	9	17 $\frac{1}{4}$	1	18	8
24	47 $\frac{3}{4}$	31 $\frac{1}{5}$	3	0	1	24	2	8	9	18	2	0	4
25	49 $\frac{3}{4}$	32 $\frac{1}{2}$	3	2	8	25	2	10	9	18 $\frac{3}{4}$	2	2	0
26	51 $\frac{3}{4}$	33 $\frac{4}{5}$	3	5	2	26	2	12	10	19 $\frac{1}{2}$	2	3	8
27	53 $\frac{3}{4}$	35 $\frac{1}{10}$	3	7	8	27	2	14	10	20 $\frac{1}{4}$	2	5	4
28	55 $\frac{3}{4}$	36 $\frac{2}{5}$	3	10	2	28	2	16	11	21	2	7	0
29	57 $\frac{3}{4}$	37 $\frac{7}{10}$	3	12	8	29	2	18	11	21 $\frac{3}{4}$	2	8	8
30	59 $\frac{3}{4}$	39	3	15	2	30	3	0	11	22 $\frac{1}{2}$	2	10	5

\* In estimating length of Radiator, allow 1 in. for bushings and plugs.

# IDEAL NEO-HOSPITAL RADIATOR

Width— $5\frac{3}{4}$  ins.

For Water or Steam



Air space between sections,  $1\frac{3}{8}$  inches.

Fitted with Ideal Vent Plug, page 184.

Can be supplied without feet. Wall Brackets, pages, 22, 49 and 50.

Swinging Radiators, page 48.

Solid high legs to give 6-in., 8-in. or 10-in. centres, page 53.

Dimensions and Tappings, pages 6 and 8.

# IDEAL NEO-HOSPITAL RADIATOR

Width—5 $\frac{3}{4}$  ins.

For Water or Steam

Number of Sections	*Length in Inches	36 ins. high 3 sq. ft. per Section			30 ins. high 2½ sq. ft. per Section			
		Heating Surface Sq. ft.	PRICE £ s. d.			Heating Surface Sq. ft.	PRICE £ s. d.	
3	7½	9	16	2	7½	14	5	
4	10¼	12	1	1 7	10	19	3	
5	12⅞	15	1	6 11	12½	1	4	1
6	15½	18	1	12 4	15	1	8	11
7	18⅛	21	1	17 9	17½	1	13	9
8	20¾	24	2	3 1	20	1	18	6
9	23⅜	27	2	8 6	22½	2	3	4
10	26	30	2	13 11	25	2	8	2
11	28⅝	33	2	19 4	27½	2	13	0
12	31¼	36	3	4 8	30	2	17	10
13	33⅞	39	3	10 1	32½	3	2	8
14	36½	42	3	15 6	35	3	7	5
15	39⅛	45	4	0 10	37½	3	12	3
16	41¾	48	4	6 3	40	3	17	1
17	44⅜	51	4	11 8	42½	4	1	11
18	47	54	4	17 0	45	4	6	9
19	49⅝	57	5	2 5	47½	4	11	6
20	52¼	60	5	7 10	50	4	16	4

Number of Sections	*Length in Inches	24 ins. high 2 sq. ft. per Section				18 ins. high 1½ sq. ft. per Section			
		Heating Surface Sq. ft.	PRICE			Heating Surface Sq. ft.	PRICE		
			£	s.	d.		£	s.	d.
3	7½	6	12	2	4½	10	0		
4	10¼	8	16	3	6	13	5		
5	12⅞	10	1	0 4	7½	16	10		
6	15½	12	1	4 5	9	1	0 2		
7	18⅛	14	1	8 5	10½	1	3 6		
8	20¾	16	1	12 6	12	1	6 10		
9	23⅜	18	1	16 7	13½	1	10 3		
10	26	20	2	0 8	15	1	13 7		
11	28⅝	22	2	4 8	16½	1	16 11		
12	31¼	24	2	8 9	18	2	0 4		
13	33⅞	26	2	12 10	19½	2	3 8		
14	36½	28	2	16 11	21	2	7 0		
15	39⅛	30	3	0 11	22½	2	10 5		
16	41¾	32	3	5 0	24	2	13 10		
17	44⅜	34	3	9 1	25½	2	17 2		
18	47	36	3	13 2	27	3	0 7		
19	49⅝	38	3	17 2	28½	3	3 11		
20	52¼	40	4	1 3	30	3	7 3		

\* In estimating length of Radiator, allow 1 in. for bushings and plugs.

# IDEAL NEO-HOSPITAL RADIATOR

Width— $7\frac{1}{4}$  ins.

For Water or Steam



Air space between sections,  $1\frac{3}{8}$  inches.

Fitted with Ideal Vent Plug, page 184.

Can be supplied without feet. Wall Brackets, pages 22, 49 and 50.

Swinging Radiators, page 48.

Solid high legs to give 6-in., 8-in. or 10-in. centres, page 53.

Dimensions and Tappings, pages 6 and 8.

## IDEAL NEO-HOSPITAL RADIATOR

Width—7 $\frac{1}{4}$  ins.

For Water or Steam

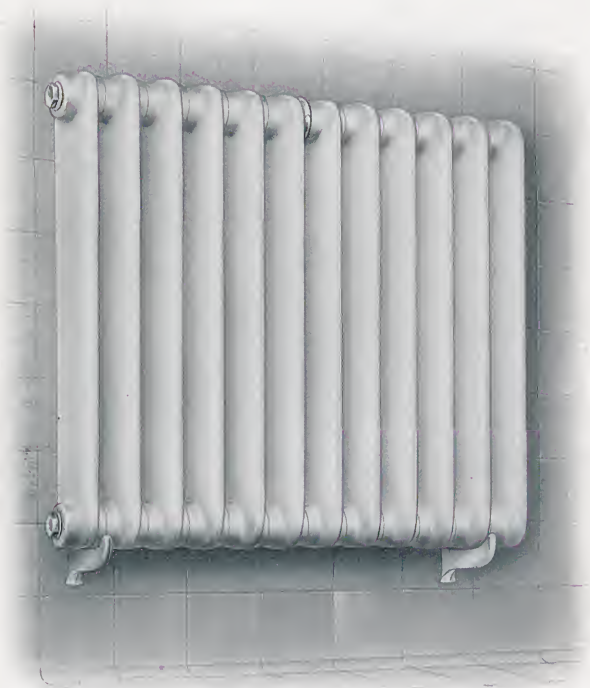
Number of Sections	*Length in Inches	36 ins. high 3 $\frac{7}{10}$ sq. ft. per Section			30 ins. high 3 $\frac{1}{10}$ sq. ft. per Section				
		Heating Surface Sq. ft.	PRICE			Heating Surface Sq. ft.	PRICE		
			£	s.	d.		£	s.	d.
3	7 $\frac{5}{8}$	11 $\frac{1}{10}$	19	11	9 $\frac{3}{10}$	17	11		
4	10 $\frac{1}{4}$	14 $\frac{4}{5}$	1	6 7	12 $\frac{2}{5}$	1	3 11		
5	12 $\frac{7}{8}$	18 $\frac{1}{2}$	1	13 3	15 $\frac{1}{2}$	1	9 10		
6	15 $\frac{1}{2}$	22 $\frac{1}{5}$	1	19 11	18 $\frac{3}{5}$	1	15 10		
7	18 $\frac{1}{8}$	25 $\frac{9}{10}$	2	6 6	21 $\frac{7}{10}$	2	1 10		
8	20 $\frac{3}{4}$	29 $\frac{3}{5}$	2	13 2	24 $\frac{4}{5}$	2	7 9		
9	23 $\frac{3}{8}$	33 $\frac{3}{10}$	2	19 10	27 $\frac{9}{10}$	2	13 9		
10	26	37	3	6 5	31	2	19 9		
11	28 $\frac{5}{8}$	40 $\frac{7}{10}$	3	13 2	34 $\frac{1}{10}$	3	5 9		
12	31 $\frac{1}{4}$	44 $\frac{2}{5}$	3	19 9	37 $\frac{1}{5}$	3	11 8		
13	33 $\frac{7}{8}$	48 $\frac{1}{5}$	4	6 5	40 $\frac{3}{10}$	3	17 8		
14	36 $\frac{1}{2}$	51 $\frac{4}{5}$	4	13 1	43 $\frac{2}{5}$	4	3 8		
15	39 $\frac{1}{8}$	55 $\frac{1}{2}$	4	19 9	46 $\frac{1}{2}$	4	9 7		
16	41 $\frac{3}{4}$	59 $\frac{1}{5}$	5	6 4	49 $\frac{3}{5}$	4	15 7		
17	44 $\frac{3}{8}$	62 $\frac{9}{10}$	5	13 0	52 $\frac{7}{10}$	5	1 7		
18	47	66 $\frac{3}{5}$	5	19 8	55 $\frac{4}{5}$	5	7 6		
19	49 $\frac{5}{8}$	70 $\frac{3}{10}$	6	6 4	58 $\frac{9}{10}$	5	13 6		
20	52 $\frac{1}{4}$	74	6	13 0	62	5	19 6		

Number of Sections	*Length in Inches	24 ins. high 2½ sq. ft. per Section			18 ins. high 1 ⅞ sq. ft. per Section				
		Heating Surface S .ft.	PRICE			Heating Surface Sq. ft.	PRICE		
			£	s.	d.		£	s.	d.
3	7½	7½	15	3	5 ⅞	12	9		
4	10¼	10	1	0 4	7 ⅞	17	0		
5	12⅞	12½	1	5 5	9 ½	1	1 3		
6	15½	15	1	10 6	11 ⅔	1	5 6		
7	18⅛	17½	1	15 7	13 ⅜	1	9 9		
8	20¾	20	2	0 7	15 ½	1	14 0		
9	23⅜	22½	2	5 8	17 ⅒	1	18 4		
10	26	25	2	10 9	19	2	2 7		
11	28⅝	27½	2	15 10	20 ⅑	2	6 10		
12	31¼	30	3	0 11	22 ⅔	2	11 1		
16	33⅞	32½	3	6 0	24 ⅞	2	15 4		
14	36½	35	3	11 1	26 ⅝	2	19 7		
15	39⅛	37½	3	16 2	28 ½	3	3 10		
16	41¾	40	4	1 3	30 ⅔	3	8 1		
17	44⅜	42½	4	6 4	32 ⅝	3	12 4		
18	47	45	4	11 5	34 ⅙	3	16 7		
19	49⅝	47½	4	16 6	36 ⅒	4	0 10		
20	52¼	50	5	1 7	38	4	5 1		

\* In estimating length of Radiator, allow 1 in. for bushings and plugs.

# IDEAL NEO-HOSPITAL RADIATORS

Widths—3,  $5\frac{3}{4}$  and  $7\frac{1}{4}$  ins.

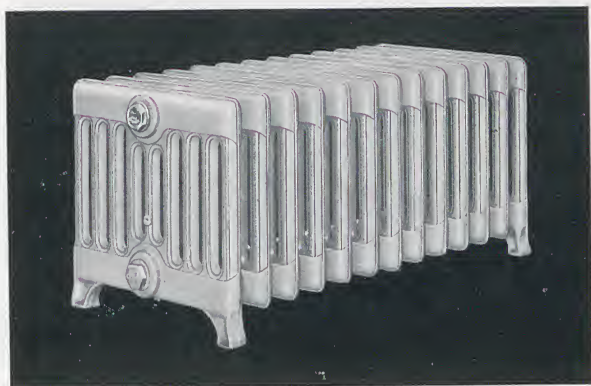


These Radiators, listed on pages 16 to 21, can be supplied without feet for fixing on wall. For Brackets see pages 49 and 50. Special Swinging Fittings can also be supplied, see page 48.



## IDEAL NEO-CLASSIC WINDOW RADIATOR

For Water or Steam



Number of Sections	13 inches high 2½ sq. ft. per Section			Number of Sections	13 inches high 2½ sq. ft. per Section		
	*Length in Inches	Heating Surface	PRICE		*Length in Inches	Heating Surface	PRICE
		Sq. ft.				£ s. d.	
3	6½	7½	17 5	17	38½	42½	4 18 6
4	8½	10	1 3 2	18	40½	45	5 4 4
5	11½	12½	1 9 0	19	42½	47½	5 10 1
6	13½	15	1 14 9	20	44½	50	5 15 11
7	15½	17½	2 0 7	21	47½	52½	6 1 8
8	17½	20	2 6 4	22	49½	55	6 7 6
9	20½	22½	2 12 2	23	51½	57½	6 13 3
10	22½	25	2 17 11	24	53½	60	6 19 1
11	24½	27½	3 3 9	25	56½	62½	7 4 10
12	26½	30	3 9 6	26	58½	65	7 10 8
13	29½	32½	3 15 4	27	60½	67½	7 16 5
14	31½	35	4 1 1	28	62½	70	8 2 3
15	33½	37½	4 6 11	29	65½	72½	8 8 0
16	35½	40	4 12 8	30	67½	75	8 13 10

\* In estimating length of Radiator, allow 1 in. for bushings and plugs.

Can be supplied without feet.

Fitted with Ideal Vent Plug, page 184.

Dimensions and Tappings, pages 7 and 8.

# IDEAL CLASSIC WALL RADIATOR

For Water or Steam



18-inch—2 sections



30-inch—1 section

Fitted with Ideal Vent Plug, page 184.  
Tappings, page 8. Wall Brackets, page 27.



# IDEAL CLASSIC WALL RADIATOR

## Assembling and Despatch

The sections of these radiators are connected together with 1-in. right- and left-hand threaded internal nipples, and are despatched assembled unless otherwise ordered; but where radiators exceed five sections, they are forwarded in two or more pieces with the necessary hexagon nipples for assembling them together. Particulars will be sent on application to enable position of brackets to be determined. If desired, internal instead of hexagon nipples will be supplied, in which case the lengths given in table for radiators of six sections or over will not apply, as only the usual one inch for bushings and plugs should then be added.

Number of Sections	*Length in Inches	30-inch			24-inch			18-inch					
		Heating Surface	PRICE			Heating Surface	PRICE			Heating Surface	PRICE		
		Sq. ft.	£	s.	d.	Sq. ft.	£	s.	d.	Sq. ft.	£	s.	d.
1	16	8¼	15	11	6⅔	12	10		5		9	8	
2	32	16½	1	11	10	13⅓	1	5	8	10		19	3
3	48	24¾	2	7	8	20	1	18	6	15	1	8	11
4	64	33	3	3	7	26⅔	2	11	5	20	1	18	7
5	80	41¼	3	19	6	33⅓	3	4	3	25	2	8	2
6	† 96¾	49½	4	15	5	40	3	17	1	30	2	17	10
7	† 113½	57¾	5	11	3	46⅔	4	9	11	35	3	7	5
8	† 128¾	66	6	7	2	53⅓	5	2	9	40	3	17	1
9	† 145½	74¼	7	3	1	60	5	15	7	45	4	6	9
10	† 160¾	82½	7	19	0	66⅔	6	8	6	50	4	16	4
11	† 177½	90¾	8	14	11	73⅓	7	1	4	55	5	6	0
12	† 193½	99	9	10	9	80	7	14	2	60	5	15	8
13	† 209½	107¼	10	6	8	86⅔	8	7	0	65	6	5	3
14	† 225½	115½	11	2	7	93⅓	8	19	10	70	6	14	11
15	† 241½	123¾	11	18	6	100	9	12	8	75	7	4	6

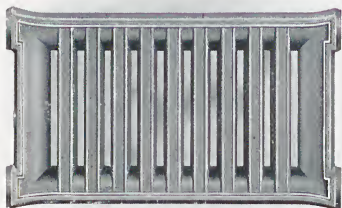
\* Add 1 in. for bushings and plugs.

† Including hexagon nipples, see above.

Height .. .. .	30	24	18	ins.
Distance between centres of top and bottom openings .. .. .	27 $\frac{15}{16}$	21 $\frac{15}{16}$	15 $\frac{15}{16}$	„
Width .. .. .	2	2	2	„

# IDEAL PLAIN WALL RADIATOR

For Water or Steam



13-inch section

Height ..	..	..	22	13 ins.
Total height ..	..	..	21 $\frac{7}{8}$	13 $\frac{5}{16}$ "
„ length ..	..	..	13 $\frac{5}{16}$	21 $\frac{7}{8}$ "
„ width ..	..	..	3	3 "
Distance between centres of tappings ..	..	..	18 $\frac{1}{2}$	10 $\frac{1}{4}$ "



22-inch section

Number of Sections	22-inch				Number of Sections	13-inch			
	*Length	Heating Surface	PRICE			*Length	Heating Surface	PRICE	
	Ins.	Sq. ft.	£	s. d.		Ins.	Sq. ft.	£	s. d.
1	13 <sup>5</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>4</sub>	14	9	1	21 <sup>7</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	15	3
2	26 <sup>5</sup> / <sub>8</sub>	14 <sup>1</sup> / <sub>2</sub>	1	9 5	2	43 <sup>3</sup> / <sub>4</sub>	15	1 10	6
3	39 <sup>15</sup> / <sub>16</sub>	21 <sup>3</sup> / <sub>4</sub>	2	4 2	3	65 <sup>5</sup> / <sub>8</sub>	22 <sup>1</sup> / <sub>2</sub>	2 5	8
4	53 <sup>1</sup> / <sub>4</sub>	29	2	18 11	4	87 <sup>1</sup> / <sub>2</sub>	30	3 0	11
5	66 <sup>9</sup> / <sub>16</sub>	36 <sup>1</sup> / <sub>4</sub>	3	13 8	5	† 111 <sup>3</sup> / <sub>8</sub>	37 <sup>1</sup> / <sub>2</sub>	3 16	2
6	79 <sup>7</sup> / <sub>8</sub>	43 <sup>1</sup> / <sub>2</sub>	4	8 4	6	† 132 <sup>1</sup> / <sub>4</sub>	45	4 11	5
7	† 95 <sup>3</sup> / <sub>16</sub>	50 <sup>3</sup> / <sub>4</sub>	5	3 1	7	† 155 <sup>1</sup> / <sub>8</sub>	52 <sup>1</sup> / <sub>2</sub>	5 6	8
8	† 107 <sup>1</sup> / <sub>2</sub>	58	5	17 10	8	† 176	60	6 1	10
9	† 121 <sup>13</sup> / <sub>16</sub>	65 <sup>1</sup> / <sub>4</sub>	6	12 6	9	† 198 <sup>7</sup> / <sub>8</sub>	67 <sup>1</sup> / <sub>2</sub>	6 17	1
10	† 134 <sup>1</sup> / <sub>8</sub>	72 <sup>1</sup> / <sub>2</sub>	7	7 3	10	† 220 <sup>3</sup> / <sub>4</sub>	75	7 12	4

\* Add 1 in. for bushings and plugs. † Including hexagon nipples, see below.

Fitted with Ideal Vent Plug, page 184.

Wall Brackets, page 27. Standard Tappings, page 8.

The sections of these radiators are connected together with 1  $\frac{1}{2}$ -in. right- and left-hand threaded internal nipples and are despatched assembled, except when otherwise ordered; but where 13-in. radiators exceed four and 22-in. radiators six sections, they are forwarded in two or more pieces, with the necessary hexagon nipples for assembling. Particulars will be sent on application to enable position of brackets to be determined. If desired, internal instead of hexagon nipples will be supplied, in which case the lengths given in table for radiators of seven sections and over will not apply, as only the usual 1 inch for bushings and plugs should then be added.

Extra heavy sections of 13-in. Plain Wall Radiators can be supplied for use with steam up to 30 lb. pressure AT THE SAME PRICE PER SECTION AS ABOVE; heating surface, 5 sq. ft.; height, 13  $\frac{5}{16}$  ins.; length, 16  $\frac{5}{8}$  ins.; width, 3 ins.

## BRACKETS FOR WALL RADIATORS

## Ideal Classic Wall

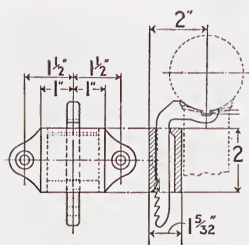


FIG. 2. Top Bracket.

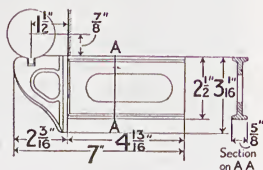


FIG. 3. Top Bracket.

Fig. 2, with vertical and horizontal adjustment, price each  $11\frac{1}{2}d.$   
 Rag bolts .. .. .  $2\frac{1}{2}d.$

Two brackets are sufficient for a radiator of average length.  
 Can also be supplied drilled and countersunk for wood screws.

Fig. 3, for building into wall .. .. . price each  $10d.$

Type "C," for wood screws. Price per bracket complete ..  $8d.$   
 Distance from wall to centre of tappings, 2 inches.

The top half of bracket is made in two parts to facilitate fixing.

## Ideal Plain Wall

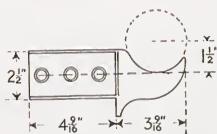


Fig: 10

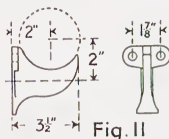


Fig. 11

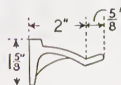
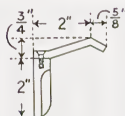


Fig. 12



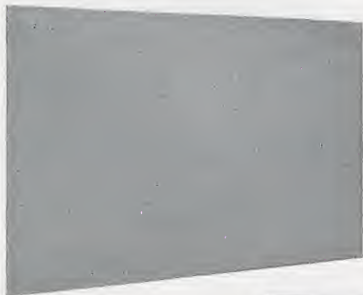
PRICE, No. 10, for building into wall .. .. . each  $7d.$   
 ,, No. 11, for fixing rag bolts .. .. .  $7d.$   
 ,, Rag bolts .. .. .  $2\frac{1}{2}d.$   
 ,, No. 12, for wood screws, per bracket complete ..  $7d.$

# IDEAL RAYRAD Nos. 35, 36 and 36A

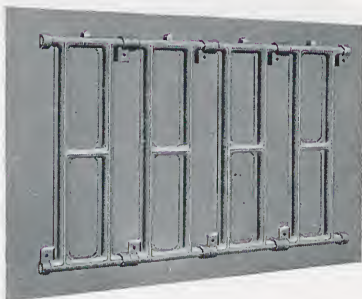
Patent No. 266817. Brit. Patent No. 425545.

Brit. Regd. Design No. 815207.

**For Water or Steam**



Front view, No. 35.



Back view, No. 35.



Front view of sections without  
plate, Nos. 35, 36 and 36A.

The Nos. 35, 36 and 36A Ideal Rayrad possess the valuable features of lightness and adaptability, and are suitable for fixing to ceilings, walls and floors. They are made in sections comprising a series of vertical and horizontal waterways, which being of cast iron are free from the possibility of corrosion. The sections are shaped to provide a surface affording good contact, specially flattened 14-gauge steel plates being screwed thereto, thus forming the front of the Rayrad and presenting a continuous face.

**IDEAL RAYRAD Nos. 35, 36 and 36A**

Patent No. 266817. Brit. Patent No. 425545.

Brit. Regd. Design No. 815207.

**For Water or Steam**Front view, Nos. 36  
and 36A.Back view, Nos. 36  
and 36A.

The No. 36 Ideal Rayrad is identical with the No. 35, except that the edges of the plate are curved to enable the Rayrad to be fixed on the face of the wall or ceiling in circumstances where flush fixing is not desirable or essential. As in this event close contact must be made to prevent leakage of air with consequent streaking, the curved edges are provided with a hidden strip as shown, and suitable asbestos rope is supplied for fitting therein to make a joint and ensure an airtight fit. The rope can be held in position by an adhesive while the Rayrad plate is being fixed.

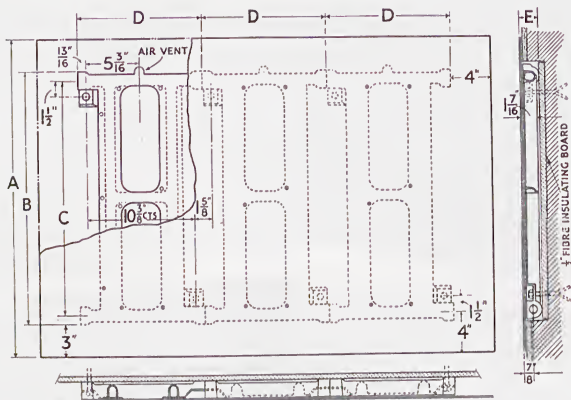
The No. 36A is the same as No. 36 except that the plate projection (E dimension, page 31) is less, for use where it is desired to fix the radiator directly on to wall or ceiling, i.e. without employing a fibre board for insulating as shown for the No. 36.

The standard plate for Nos. 35, 36 and 36A extends 3 ins. top and bottom and 4 ins. each side beyond the Rayrad and connections; the size of plate can, however, be varied to meet architectural requirements, and where the conditions call for larger surface area than the regular sizes obtainable, it will be supplied in suitable sheets to make the least number of joints.

# IDEAL RAYRAD Nos. 35, 36 and 36A

For Water or Steam

## No. 35 Dimensions and Prices



The sections are connected together with  $\frac{3}{4}$ -in. right- and left-hand threaded internal nipples. They are despatched in any size up to a maximum of 10 sections in length and with steel plate to suit. The heating surface should be divided into two or more individual radiators, rather than exceed the length mentioned.

Total height of standard plate	A ins.	36	30	24	18	13
Height of section .. ..	B ins.	30	24	18	12	12
Width of section .. ..	D ins.	12	12	12	12	12
Depth of section, including plate .. ..	E ins.	13 $\frac{3}{4}$	13 $\frac{3}{4}$	13 $\frac{3}{4}$	13 $\frac{3}{4}$	13 $\frac{3}{4}$
Centre to centre of tappings	C ins.	28	22	16	10	10
Distance from edge of standard plate to centre of tappings	ins.	4	4	4	4	1 $\frac{1}{2}$
* Price per section .. ..	..	17/-	14/11	3/1	10/10	9/9

Fully descriptive booklet giving Transmission Table sent on request.

When ordering, specify both height of section and plate.

\* Including standard size of plate (as A, B, C, D, page 33). For plates larger than standard sizes, prices on application.

Size of tappings,  $\frac{3}{4}$  in.

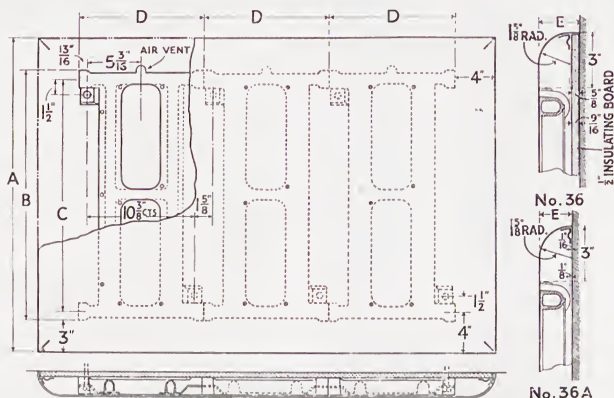
When fitted on wall a  $\frac{1}{4}$ -in. flush airvent can be provided at top left- or right-hand corner as in diagram. If air is vented through flow connection, this airvent is unnecessary. Requirements must be clearly stated when ordering, and if airvent is needed position should be specified, viz. left- or right-hand top corner.



# IDEAL RAYRAD Nos. 35, 36 and 36A

For Water or Steam

## Nos. 36 and 36A Dimensions and Prices



The sections are connected together with  $\frac{3}{4}$ -in. right- and left-hand threaded internal nipples. They are despatched in any size up to a maximum of 10 sections in length and with steel plate to suit. The heating surface should be divided into two or more individual radiators, rather than exceed the length mentioned.

Total height of standard plate	A ins.	36	30	24	18
Height of section .. ..	B ins.	30	24	18	12
Width of section .. ..	D ins.	12	12	12	12
Depth, including plate, No. 36	E ins.	2 $\frac{5}{16}$	2 $\frac{5}{16}$	2 $\frac{5}{16}$	2 $\frac{5}{16}$
Ditto, do., .. .. No. 36A	E ins.	1 $\frac{13}{16}$	1 $\frac{13}{16}$	1 $\frac{13}{16}$	1 $\frac{13}{16}$
Centre to centre of tappings	C ins.	28	22	16	10
Distance from edge of standard plate to centre of tappings	ins.	4	4	4	4
*Price per section .. ..	..	21/6	19/1	16/8	13/9

Fully descriptive booklet giving Transmission Table sent on request.

**When ordering, specify both height of section and plate.**

\* Including standard size of plate (as A, B, C, D, page 33). For plates larger than standard sizes, prices on application.

Size of tappings,  $\frac{3}{4}$  in.

When fitted on wall a  $\frac{1}{4}$ -in. flush airvent can be provided at top left- or right-hand corner as in diagram. If air is vented through flow connection, this airvent is unnecessary. Requirements must be clearly stated when ordering, and if airvent is needed position should be specified, viz. left- or right-hand top corner.



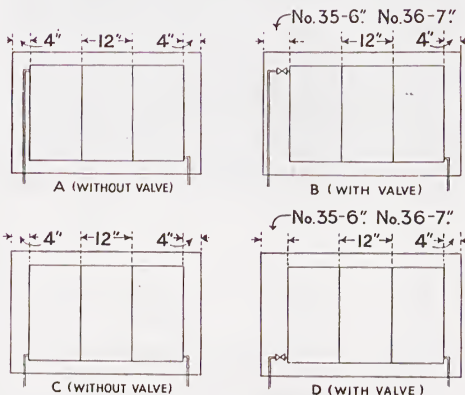


# IDEAL RAYRAD Nos. 35, 36 and 36A

For Water or Steam

Face Dimensions

For  $\frac{3}{4}$ -in. or  $\frac{1}{2}$ -in. pipe connections with and without Concealed Valve.



Front view with plate attached.

Unless otherwise ordered, the plate will overlap the radiator 3 ins. at top and bottom.

Indicate position of connections by quoting above reference letters. When connections are required to be handed the reverse of above, add letter R to reference ; thus, AR will indicate top right-hand supply and bottom left-hand return without concealed valve ; BR, ditto, with valve ; DR, bottom opposite end connections with valve at right-hand side.

Diagonal connections are recommended and are essential for ceiling or floor fixing. Top and bottom same end connections should be avoided.

The use of a street elbow in either radiator tapping or valve as shown will readily provide back or other angle connection, plate dimensions as above.

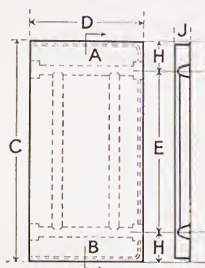


No. 13 or 13R Concealed Valve is suitable for fixing at either corner, top or bottom. For particulars see page 191.

# IDEAL RAYRAD No. 15

Patent No. 266817

For Water or Steam



Section on AB

Sections connected together with 1-in. right- and left-hand threaded internal nipples. Despatched assembled up to eight sections unless otherwise ordered ; above this size additional sections sent loose with the necessary nipples for assembling. See page 55 regarding decoration ; metallic paints should not be used.

## Dimensions and Prices

Total Height .. .. .	C ins.	30	24	18
PRICE per section .. .. .		24/-	20/6	18/-
Width of section .. .. .	D ins.	16	16	16
Centre to centre of tappings .. .. .	E „	22	18	12
Distance from edge to centre of tapping .. .. .	H „	4	3	3
Depth of section .. .. .	J „	2½	2½	2½

Dummy sections, full or half width (16 or 8 ins.) for use as filling-in plates, can be supplied for all heights and types shown above. Price on application.

Size of tappings, 1 in. at side or at back. When fitted on ceiling, the flow and return connections should be diagonally opposite.

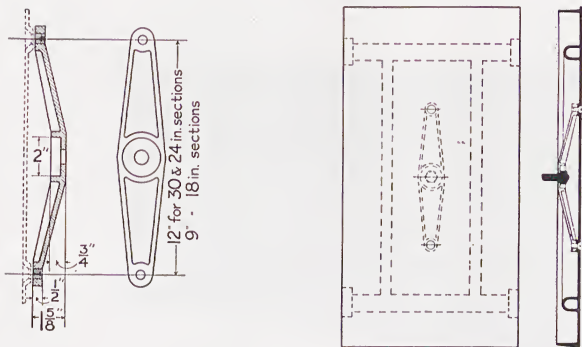
Provision is made for ¾-in. flush airvent on face of Rayrad near top edge. If airvent is made through flow main no tapping is necessary. State requirements on order.

For particulars of concealed valves, see page 191.

*Fully descriptive booklet giving Transmission Table sent on request.*

## IDEAL RAYRAD No. 15

## Cast Iron Brackets

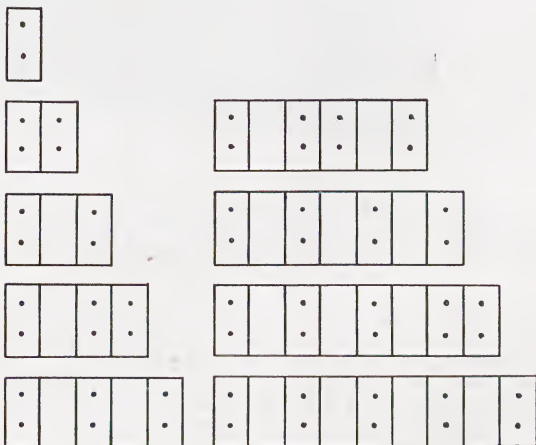


The brackets are tapped top and bottom for screwing to section and have cored hole in centre for rag bolt for fixing to wall.

When ordered with Rayrad, sections will be drilled to suit.

PRICE, including screws and  $\frac{5}{8}$ -in. rag bolt . . . each 1s.  $1\frac{1}{2}d$ .

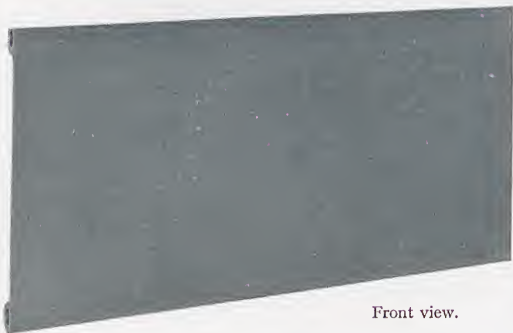
## Standard Drillings for Brackets



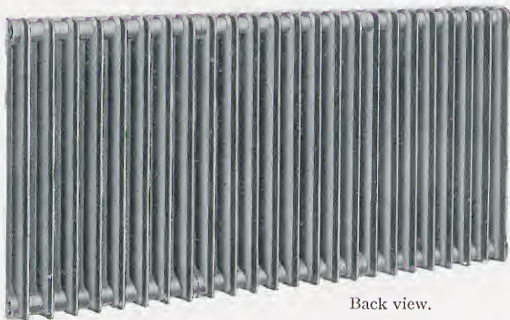
## IDEAL RAYRAD No. 24

Brit. Patent Nos. 302073 and 370556

For Water or Steam



Front view.



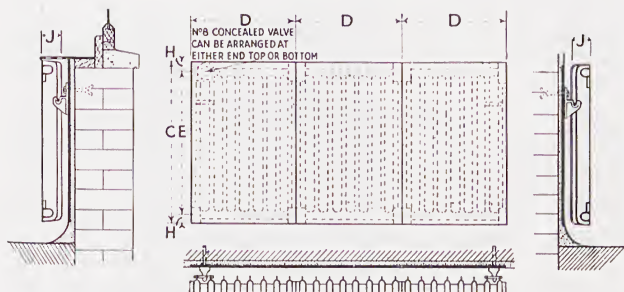
Back view.

The No. 24 Rayrad is designed primarily for application in window recesses, although if desired it can also be fitted in the form of an enclosure (see diagram on page 38), quite apart from window positions.

Whilst presenting a flat front like the other types of Rayrad, it has in addition considerable heating surface at the back which is free to transmit heat by convection. The depth of the section is 3 ins., and in order to obtain efficient transmission, it should be fixed so as to leave a space of 1 in. behind or a minimum of 4 ins. to the front of the Rayrad, and also to give a clearance of 3 ins. or more above floor level.

# IDEAL RAYRAD No. 24

For Water or Steam



Ideal Rayrad sections are connected together with 1-in. right- and left-hand threaded internal nipples. They are despatched assembled up to six sections in length, unless otherwise ordered ; but when above this size the additional sections are sent loose with the necessary nipples for assembling.

See page 55 regarding decoration ; metallic paints should not be used.

## Dimensions and Prices

Total Height .. .. .	C ins.	30	24	18
16-in. section, width .. .. .	D „	16	16	16
Surface per section .. .. .	sq. ft.	14½	11½	8½
PRICE per section .. .. .		47/7	38/2	29/3
8-in. section, width .. .. .	D ins.	8	8	8
Surface per section .. .. .	sq. ft.	7¼	5¾	4¼
PRICE per section .. .. .		27/7	22/-	16/9
Centre to centre of tappings .. .. .	E ins.	27½	21½	15½
Distance from edge to centre of tapping .. .. .	H „	1¼	1¼	1¼
Depth of section .. .. .	J „	3⅛	3⅛	3⅛

Size of tappings 1 in. If desired, sections can be supplied with tappings at back instead of at side, without extra charge.

Provision is made for ⅜-in. flush airvent on face of Rayrad near top edge. If airvent is made through flow main no tapping is necessary. State requirements on order.

*Fully descriptive booklet giving Transmission Table sent on request.*

**Position and Number of Fixing Pins.** See also page 38.



For Particulars of Brackets, see page 38.

## IDEAL RAYRAD No. 24

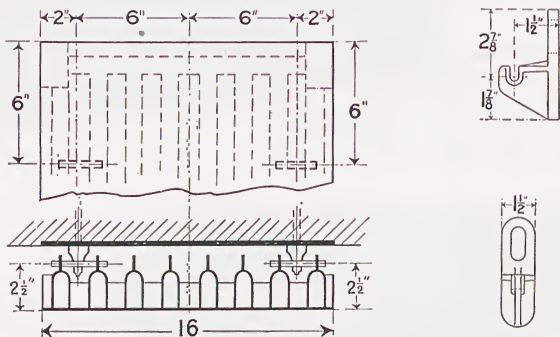
The standard method of fixing is by means of short pins which pass through drilled holes in the extended surface at back as shown in the diagrams. Similar pins can be supplied at bottom, if desired, where the pipe connections will not suitably hold the Rayrad in position ; distance from bottom edge to centre of pin, 3 ins.

### Adjustable Brackets

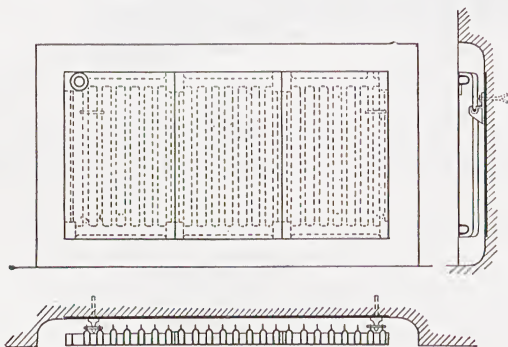
The standard brackets shown below give a projection of 4 ins. from wall face to front of Rayrad.

PRICE, complete with Rag Bolt, each 1s. 1½d.

Similar brackets can be supplied to give a projection of 4½ ins. and 5 ins. State which required.



When Concealed Valve is used in either right- or left-hand corner, or where back tappings are supplied, the 2-inch dimension should read 4 inches, and the adjacent 6-inch dimension 4 inches. See page 191 for Concealed Valves.



No. 24 Rayrad fitted in Wall Recess.

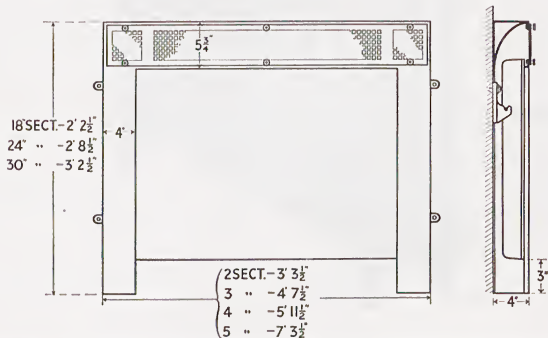


## IDEAL RAYRAD No. 24

## Enclosures

When it is desired to fix the No. 24 Ideal Rayrad independently of window or other recesses, sheet-metal enclosures can be supplied. These enclosures reach from floor level to a point  $5\frac{1}{2}$  inches above the top of the Rayrad, and allow a space of 4 inches at either side for piping connections. They are screwed to the wall, and the back edge is covered with a felt strip to ensure airtight contact with the wall surface.

The inside of the enclosure is fitted with a horizontal baffle to assist the convection currents passing behind the Rayrad, the back surface of which is readily cleaned through the opening in the face of the enclosure. This opening is fitted with a grilled plate which can readily be removed. The projection of enclosure allows for the front surface of Rayrad being fitted 4 inches from wall face.



No. of Rayrad Sections	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7
30-in. height, each	58/9	61/-	63/3	72/-	80/9	92/3	98/3	115/6	126/6	141/9	154/3	189/3
24-in. " "	56/3	58/6	61/-	69/6	78/3	89/9	95/9	113/-	124/-	139/3	151/9	186/9
18-in. " "	54/-	56/3	58/9	67/3	76/-	87/6	93/6	110/9	121/9	137/-	149/6	184/6

For lots of one dozen above prices are reduced by 20 per cent.

Enclosures are supplied with priming coat of grey paint.

When ordering enclosures for Rayrads having concealed valve in top, specify whether right- or left-hand position.

# IDEAL ELECTRIC RADIATORS

For Water



The radiators are finished in an attractive antique bronze cellulose, which is both decorative and durable.

# IDEAL ELECTRIC RADIATORS

## For Water

These radiators are specially intended for use in shops, offices, etc., where the cleanliness and convenience of an electric radiator are desirable without the risks which are inseparable from any type of heater having a luminous flame or element.

No installation cost is incurred—they only need plugging in to existing power points. A turn of the switch brings them into immediate operation. Economical and 100 per cent. efficient. No fumes, no smell, no excessive drying of the air.

They are supplied in three sizes in each of three standard loadings of 1,000, 1,500 and 2,000 watts. The immersion elements are suitable for 200/210, 220/230 and 240/250 volts A.C. or D.C.

The voltage of the current available must be stated on order.

Any other sizes of radiators can be supplied to special order.

The standard types are suitable for use with switches to give 3-heat control.

Thermostats to automatically control the radiator to a pre-determined temperature can also be supplied to special order.

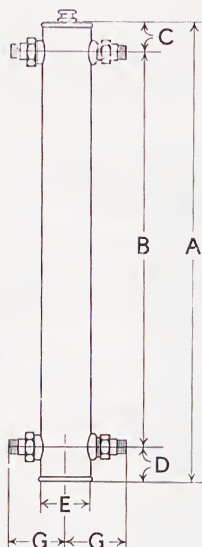
Type of Radiator	No. of Sections	Height	Length	Width	Wattage	PRICE		
		ins.	* ins.	ins.		£	s.	d.
No. 4 Neo-Classic	8	36	17 $\frac{7}{8}$	5 $\frac{5}{8}$	1,000	4	15	6
	10	30	22 $\frac{3}{8}$			4	17	0
	12	24	23 $\frac{7}{8}$			4	18	6
No. 4 Neo-Classic	12	36	26 $\frac{7}{8}$	5 $\frac{5}{8}$	1,500	6	6	6
	15	30	33 $\frac{5}{8}$			6	9	0
	18	24	35 $\frac{7}{8}$			6	11	6
No. 4 Neo-Classic	16	36	35 $\frac{7}{8}$	5 $\frac{5}{8}$	2,000	8	0	0
	20	30	44 $\frac{7}{8}$			8	4	6
	24	24	47 $\frac{7}{8}$			8	9	0

\* Add 3 $\frac{3}{4}$  ins. to length to allow for projection of immersion heater.

# IDEAL INDIRECT RADIATOR HEATER

Brit. Patent No. 468156

For Neo-Classic Radiators



Radiator with Heater attached.

The purpose of this Heater is to enable a cast iron radiator to be connected to a direct hot-water supply system in soft-water districts without discoloration of the water due to rust. The Heater is made entirely of copper.

## Dimensions in Inches

Height of Radiator	A	B	C	D	E	F	G
24-in.	$23 \frac{5}{16}$	$19 \frac{11}{16}$	$1 \frac{3}{8}$	$2 \frac{1}{4}$	$3 \frac{1}{4}$	$\frac{3}{4}$	$3 \frac{3}{4}$
30-in.	$29 \frac{7}{32}$	$25 \frac{19}{32}$	$1 \frac{3}{8}$	$2 \frac{1}{4}$	$3 \frac{1}{4}$	$\frac{3}{4}$	$3 \frac{3}{4}$

## Prices

No. of Heater	For Radiator		Height	Number of Sections	£	s.	d.
1	Neo-Classic No. 2	..	24-in.	up to 20	3	10	0
2	"	"	30 "	" 20	3	15	0
1	"	No. 4	24 "	" 20	3	10	0
2	"	"	30 "	" 20	3	15	0
1	"	No. 6	24 "	" 16	3	10	0
2	"	"	30 "	" 12	3	15	0

# IDEAL EXCELSIOR CAST IRON HEATER

For Water or Steam

Suitable for steam pressures up to 100 lb.

Tested to 300 lb. Hydrostatic Pressure.



Heating surface per section, 12 sq. ft.

Length of section,  $36\frac{3}{4}$  ins. ; Height, 8 ins. ; Width,  $2\frac{1}{2}$  ins.

Width occupied in stack connected with regular nipples,  $3\frac{7}{8}$  ins. ; or, when specially ordered, can be connected with nipples to make the space occupied in stack  $3\frac{3}{8}$  or  $4\frac{3}{8}$  ins.\*

Assembled with extra heavy malleable iron  $1\frac{1}{2}$ -in. right- and left-hand threaded nipples, having hexagon nut at centre.

Free air space per section with regular nipples, 50 sq. ins.

„	„	„	$3\frac{3}{8}$ -ins.	„	32	„
„	„	„	$4\frac{3}{8}$ -ins.	„	68	„

\* Add 1 in. for bushings and plugs.

Price per section .. .. 22s. 0d.

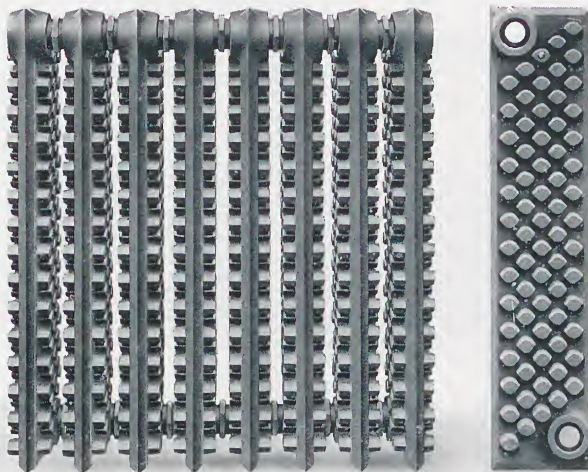
NOTE.—Unless otherwise specified, sections will be forwarded assembled, with nipples having hexagon nut at centre ; but where loose sections are preferred, orders should state the number of stacks into which the sections will be assembled.

# VENTO CAST IRON HEATER

For Water or Steam

Suitable for steam pressures up to 50 lb.

Tested to 150 lb. Hydrostatic Pressure



Front view of eight-section Heater.

End view.

Nominal Height : 40 ins. Heating Surface : 10.75 sq. ft. per section.

No. of Sections in Stack	Heating Surface Sq. ft.	Equivalent in Lineal Feet of 1-in. Pipe	5-in Centres of Sections		5 $\frac{3}{8}$ -in. Centres of Sections		4 $\frac{5}{8}$ -in. Centres of Sections	
			Standard 44% of Face		52% of Face		37% of Face	
			Net Air Space Sq. ft.	Length of Stack Ins.	Net Air Space Sq. ft.	Length of Stack Ins.	Net Air Space Sq. ft.	Length of Stack Ins.
7	75.25	226	4.34	33 $\frac{7}{8}$	5.12	36 $\frac{1}{8}$	3.67	31 $\frac{5}{8}$
8	86.00	258	4.96	38 $\frac{7}{8}$	5.85	41 $\frac{1}{2}$	4.20	36 $\frac{1}{4}$
9	96.75	290	5.58	43 $\frac{7}{8}$	6.57	46 $\frac{7}{8}$	4.72	40 $\frac{7}{8}$
10	107.50	323	6.20	48 $\frac{7}{8}$	7.29	52 $\frac{1}{4}$	5.25	45 $\frac{1}{2}$
11	118.25	355	6.82	53 $\frac{7}{8}$	8.02	57 $\frac{5}{8}$	5.77	50 $\frac{1}{8}$
12	129.00	387	7.44	58 $\frac{7}{8}$	8.74	63	6.30	54 $\frac{3}{4}$
13	139.75	419	8.06	63 $\frac{7}{8}$	9.47	68 $\frac{3}{8}$	6.82	59 $\frac{3}{8}$
14	150.50	452	8.68	68 $\frac{7}{8}$	10.19	73 $\frac{3}{4}$	7.35	64
15	161.25	484	9.30	73 $\frac{7}{8}$	10.91	79 $\frac{1}{8}$	7.87	68 $\frac{5}{8}$
16	172.00	516	9.92	78 $\frac{7}{8}$	11.64	84 $\frac{1}{2}$	8.40	73
17	182.75	548	10.54	83 $\frac{7}{8}$	12.36	89 $\frac{7}{8}$	8.92	77 $\frac{1}{4}$
18	193.50	581	11.16	88 $\frac{7}{8}$	13.09	95 $\frac{1}{4}$	9.45	82 $\frac{1}{2}$
19	204.25	613	11.78	93 $\frac{7}{8}$	13.82	100 $\frac{5}{8}$	9.97	87 $\frac{1}{8}$
20	215.00	645	12.40	98 $\frac{7}{8}$	14.54	106	10.50	91 $\frac{3}{4}$

Price per Section, 40-in. . . £1 6s. 0d.

Dimensions, Final Temperatures and Condensation, pages 45 and 46.



## VENTO CAST IRON HEATER



### Assembling and Despatch

The sections are assembled with  $2\frac{1}{2}$ -in. heavy cast iron nipples, having hexagon nut at centre.

Unless otherwise ordered, Vento Heaters are forwarded in groups of up to eight sections, tapped  $2\frac{1}{2}$  ins. right hand at top for supply,  $2\frac{1}{2}$  ins. left hand at bottom for return, bushed to size required, and assembled to 5-in. centres.

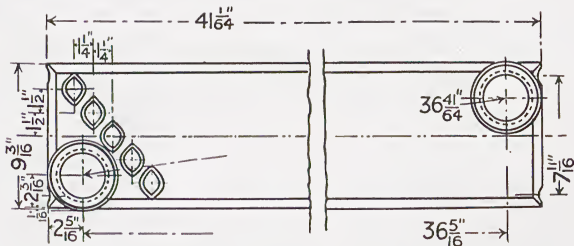
Both end sections of each group are tapped  $\frac{3}{8}$  in. for steam air vent. Both tappings should be used unless flow and return connections are at same end, in which case airvent should also be at same end.

The number of sections in a group with flow and return tappings at same end must not exceed 18 sections ; opposite ends, 24 sections.

The following additional sizes of Vento Heaters can be supplied, about eight weeks being required for delivery ; prices on application.

Description	Heating Surface	Height	Width	5-in. Centres	5 $\frac{3}{8}$ -in. Centres	4 $\frac{5}{8}$ -in. Centres
				Standard 44% of Face	52% of Face	37 % of Face
				Net Air Space per Section		
	Sq. ft.	Ins.	Ins.	Sq. ft.	Sq. ft.	Sq. ft.
50-in. Regular	13.50	50 $\frac{29}{32}$	9 $\frac{1}{8}$	0.77	0.90	0.65
60-in. „	16.00	60 $\frac{11}{16}$	9 $\frac{1}{8}$	0.92	1.08	0.78

### Dimensions



Final Temperatures and Condensation, page 46.

# VENTO CAST IRON HEATER

**Regular Section—Standard Spacing, 5-in. centres**

**Final Temperatures and Condensation**

**Steam at 227°—5 lb. Gauge Pressure. Entering Air 30° F.**

Number of Stacks deep	Velocity through Heater in feet per minute—Measured at 70°											
	600		800		1000		1200		1400		1600	
	Final Temp. Air leaving Heater	Cond. Lb. per sq. ft. per hour	F.T.	C.	F.T.	C.	F.T.	C.	F.T.	C.	F.T.	C.
1	66	1.39	62	1.64	60	1.92	58	2.17	56	2.33	54	2.46
2	93	1.21	87	1.46	83	1.70	79	1.89	76	2.06	73	2.21
3	115	1.09	108	1.33	103	1.56	98	1.75	94	1.91	91	2.08
4	134	1.00	126	1.23	120	1.44	115	1.63	110	1.80	106	1.95
5	148	.91	140	1.13	134	1.33	128	1.51	123	1.67	118	1.80
6	159	.83	151	1.04	145	1.23	139	1.40	134	1.56	130	1.71
7	169	.76	161	.96	155	1.15	149	1.31	144	1.46	139	1.60
8	177	.71	169	.89	163	1.07	158	1.23	153	1.38	148	1.51

**Final Temperatures of Air leaving Heater**

**Hot Water at 180° Mean Temperature. Entering Air 30° F.**

Number of Stacks deep	Velocity through Heater in feet per minute—Measured at 70°					
	600	800	1000	1200	1400	1600
	F.T.	F.T.	F.T.	F.T.	F.T.	F.T.
1	56	53	51	49	48	47
2	76	71	68	65	63	61
3	92	87	83	80	77	74
4	105	99	95	91	88	85
5	116	110	105	101	98	95
6	125	119	114	110	106	103
7	132	127	122	117	114	111
8	139	133	129	124	120	117

## Advantages

These Heaters are a great improvement on pipe coils for heating, ventilating and drying work in conjunction with fans. Their leading features are:

**Few Parts:** Section consists of three parts—main casting and two hexagon nipples. The equivalent Coil consists of a base, eight risers, four nipples and eight elbows, or a total of twenty-one pieces—a difference in favour of the Vento section of 1 to 7.

**Few Joints:** Section is complete with four screwed joints. The equivalent Pipe Coil requires twenty-four screwed joints—a difference in favour of the Vento section of 1 to 6, or one-sixth as many joints.

**Compactness:** A Vento Heater occupies about 15 per cent. less space than the equivalent pipe Coil Heater—a valuable feature, especially where space is an important factor.

# IDEAL MARINE RADIATORS

Tested to 600 lb. Hydrostatic Pressure



Height—24 inches.

## Bulkhead Pattern

These Radiators are specially designed for ships, railway carriages and wherever the use of high pressure steam up to 200 lb. is desired, or where the maximum amount of heating surface in a minimum space is necessary.

Radiators consisting of more than one section are assembled with right- and left-hand threaded close taper nipples. Each section is supplied with a pair of brackets for fixing to bulkhead. Back plates can also be furnished for the support of sections, and these are designed to bring the Radiator forward from the bulkhead, as shown in Fig. 2.

These Radiators are tapped at top and bottom for 1-in. pipe connections.

Heating Surface per section	.. .. .	4 sq. ft.
PRICE per section, including pair of brackets	.. .. .	14s. 2d.
Extra for back plates	.. .. .	3s. 6d.

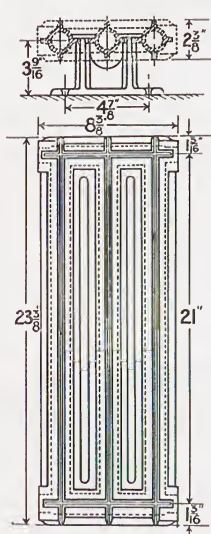


Fig. 1

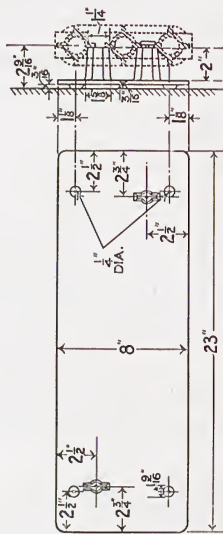
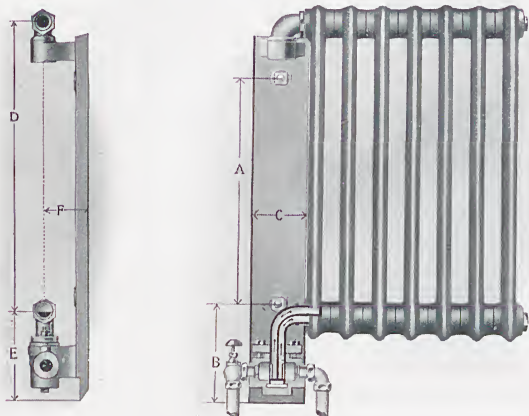


Fig. 2

*Ships' Heater Valves, page 192.*

# ASTRO HOSPITAL SWINGING FITTINGS

## For Ideal Neo-Hospital Radiators



The sockets in these Fittings are cast solid in one piece with the wall bracket, and to obviate any undue strain on either hinge, are bored out in direct alignment.

The lower elbow has an internal web directing the supply and return currents and ensuring a perfect circulation.

### Dimensions in Inches

Height of Radiator	A	B		C		D	E		F		
		3-in.	5 $\frac{3}{4}$ & 7 $\frac{1}{4}$ -in.	3-in.	5 $\frac{3}{4}$ & 7 $\frac{1}{4}$ -in.		3-in.	5 $\frac{3}{4}$ & 7 $\frac{1}{4}$ -in.	3-in.	5 $\frac{3}{4}$ -in.	7 $\frac{1}{4}$ -in.
36	24	—	9 $\frac{1}{2}$	—	5	30 $\frac{9}{16}$	—	8 $\frac{1}{4}$	—	3 $\frac{1}{2}$	4 $\frac{7}{16}$
30	18	8 $\frac{3}{4}$	9 $\frac{1}{2}$	4 $\frac{1}{2}$	5	24 $\frac{9}{16}$	7 $\frac{1}{8}$	8 $\frac{1}{4}$	2 $\frac{11}{16}$	3 $\frac{1}{2}$	4 $\frac{7}{16}$
24	12	8 $\frac{3}{4}$	9 $\frac{1}{2}$	4 $\frac{1}{2}$	5	18 $\frac{9}{16}$	7 $\frac{1}{8}$	8 $\frac{1}{4}$	2 $\frac{11}{16}$	3 $\frac{1}{2}$	4 $\frac{7}{16}$

Diameter of bolt holes in wall brackets,  $\frac{7}{8}$  in. Size of tappings,  $\frac{3}{4}$  in., unless otherwise ordered.

PRICE per set—3-in. and 5 $\frac{3}{4}$ -in. Hospital .. £5 2s. 0d.

7 $\frac{1}{4}$ -in. Hospital .. .. £5 10s. 0d.

Special Vulcanised Asbestos Block Packing Ring  
(one required for each gland) .. .. each 5s. 6d.

Vulcanised Packing Rings are only supplied if specially ordered.

Special Lewis Bolt for fixing bracket (two required per bracket) .. .. each 3s. 9d.

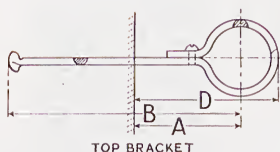
Can be supplied for swinging from right- or left-hand side ; right-hand pattern (as illustrated) supplied unless otherwise ordered.

The number of sections in Radiator should not exceed eighteen.

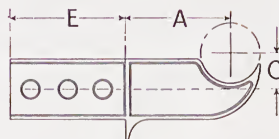
A Set of Fittings consists of the Wall Bracket and Top Socket with Hinge Elbow, and Bottom Combination Socket and Stuffing Box, fitted with Webbed Hinge Elbow. Valves and Unions are not included in above prices.

# RADIATOR SUNDRIES

## Ideal Wall Brackets



TOP BRACKET



BOTTOM BRACKET

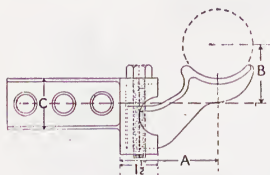
Suitable for Radiators	Dimensions in Inches					Price with Standard Shank		Price with Shank $4\frac{1}{2}$ " longer	
	A	B	C	D	E	Top each	Btm. each	Top each	Btm. each
Neo-Classic No. 2 ..	$2\frac{13}{16}$	$8\frac{1}{4}$	$1\frac{3}{16}$	4	$4\frac{3}{4}$	-/7	-/9	-/10	$1/0\frac{1}{2}$
„ „ No. 4—									
18-in and 24-in. ..	$4\frac{5}{16}$	$9\frac{3}{4}$	$1\frac{7}{16}$	$5\frac{1}{2}$	$4\frac{3}{4}$	-/7	-/9	-/10	$1/0\frac{1}{2}$
30-in. and 36-in.	$4\frac{5}{16}$	$9\frac{3}{4}$	$1\frac{7}{16}$	$5\frac{3}{4}$	$4\frac{3}{4}$	-/7	-/9	-/10	$1/0\frac{1}{2}$
Neo-Classic No. 6—									
13, 18 and 24-in.	$5\frac{13}{16}$	$11\frac{1}{4}$	$1\frac{7}{16}$	7	$4\frac{3}{4}$	-/7	$1/1\frac{1}{2}$	-/10	$1/6$
30-in. and 36-in.	$5\frac{13}{16}$	$11\frac{1}{4}$	$1\frac{7}{16}$	$7\frac{1}{4}$	$4\frac{3}{4}$	-/7	$1/1\frac{1}{2}$	-/10	$1/6$
Neo-Hospital 3-in. ..	3	$8\frac{1}{4}$	$1\frac{3}{16}$	4	$4\frac{3}{4}$	-/7	-/9	-/10	$1/0\frac{1}{2}$
„ $5\frac{3}{4}$ -in. . .	$4\frac{5}{16}$	$9\frac{3}{4}$	$1\frac{7}{16}$	$5\frac{3}{4}$	$4\frac{3}{4}$	-/7	-/9	-/10	$1/0\frac{1}{2}$
„ $7\frac{1}{4}$ -in. . .	$5\frac{1}{8}$	$11\frac{1}{4}$	$1\frac{7}{16}$	$6\frac{9}{16}$	$4\frac{3}{4}$	-/7	$1/1\frac{1}{2}$	-/10	$1/6$

These Brackets can also be supplied at the same price for screwing to woodwork ; unless otherwise ordered, brickwork pattern will be supplied. For Adjustable Wall Brackets, see page 50.

When ordering, state height of radiator.

## RADIATOR SUNDRIES

### Ideal Improved Adjustable Top Brackets



These Brackets have an adjustment, both horizontal and vertical, up to 1 inch ; the vertical adjustment is obtained by means of a  $\frac{1}{2}$ -in. bolt. The Brackets can also be supplied for use with rag bolts or wood screws at the same prices.

Suitable for Radiators	Dimensions in inches			PRICE each
	A	B*	C	
Neo-Classic No. 2 .. .. .	$2\frac{13}{16}$	$1\frac{15}{16}$	2	2/3
„ „ No. 4 (36 and 30-in.) ..	$4\frac{3}{8}$	$2\frac{1}{4}$	2	2/3
„ „ No. 4 (24 and 18-in.) ..	$4\frac{3}{8}$	$2\frac{1}{16}$	2	2/3
„ „ No. 6 (36, 30 and 13-in.)	$5\frac{7}{8}$	$2\frac{1}{4}$	$2\frac{1}{2}$	2/10
„ „ No. 6 (24 and 18-in.) ..	$5\frac{7}{8}$	$2\frac{1}{16}$	$2\frac{1}{2}$	2/10
Neo-Hospital, 3-in. width .. ..	3	$1\frac{15}{16}$	2	2/3
„ „ $5\frac{3}{4}$ -in. „ .. .. .	$4\frac{3}{8}$	$2\frac{1}{4}$	2	2/3
„ „ $7\frac{1}{4}$ -in. „ .. .. .	$5\frac{1}{8}$	$2\frac{1}{4}$	$2\frac{1}{2}$	2/10
Plain Wall .. .. .	$3\frac{7}{8}$	$2\frac{1}{2}$	2	2/10

\* Minimum.

When ordering, state height of radiator.

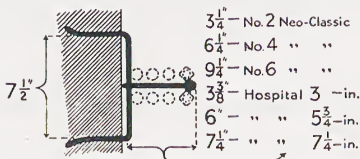
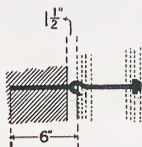
### Wall Stays

For Ideal Neo-Classic and Neo-Hospital Radiators.\*

PRICE .. each  $11\frac{1}{2}d.$

\* State type and height of radiator.

Can also be supplied for use with wood screws at the same price.



$3\frac{1}{4}$ —No. 2 Neo-Classic  
 $6\frac{1}{4}$ —No. 4 „ „  
 $9\frac{1}{4}$ —No. 6 „ „  
 $3\frac{3}{8}$ —Hospital 3 -in.  
 $6$ — „ „  $5\frac{3}{4}$ -in.  
 $7\frac{1}{4}$ — „ „  $7\frac{1}{4}$ -in.



## RADIATOR SUNDRIES

## Ideal Detachable Steel Baffle Plates



For one side only of Radiator, to reach floor level or bottom hub. **State which required.**

## Advantages

One-third the weight of cast iron plates.

Easily fixed or removed.

Strong and durable.

Neat and well-finished appearance.

PRICE per Radiator section for

Ideal Neo-Classic and Ideal

Neo-Hospital .. .. 4*d.*

Height of Radiator, ins. .. ..	36	30	24	20
Height of Plates—Long pattern, ins.	24	24	18	14
Short pattern ..	21	21	15	11

## Radiator Brushes



No. 1. Suitable for all types of Radiators except Wall pattern.

PRICE each .. 2*s.* 0*d.*



No. 2. For all Ideal Wall Radiators.

PRICE .. each 3*s.* 0*d.*

# RADIATOR SUNDRIES

## Ideal Radiator Tops



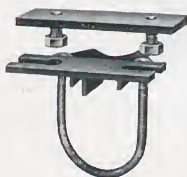
Made of sheet steel for fixing to wall. The tops are 4 inches longer than the Radiators.

Width of Top Ins.	Type of Radiator	PRICES	
		For Radiator of 6 Sections	Over 6 Sections, extra per Section
5	Neo-Classic No. 2 .. ..	5s. 4d.	2½d.
8	„ „ No. 4*.. ..	5s. 7½d.	2½d.
11	„ „ No. 6*.. ..	6s. 2d.	3½d.
5	Neo-Hospital, 3-in. width ..	5s. 4d.	2½d.
8	„ „ 5¾-in. „ ..	5s. 11d.	3½d.
9½	„ „ 7¼-in. „ ..	6s. 6d.	3½d.
5	Classic Wall .. ..	For Radiator of 2 Sections	Over 2 Sections, extra per Section
		7s. 3d.	1s. 6d.

\* State height of radiator.

## Ideal Improved Adjustable Radiator Saddles

These Saddles are supplied in pairs, i.e. one right-hand and one left-hand. They permit a horizontal adjustment up to half-an-inch.



This is specially valuable in the case of wood tops, where shrinkage occurs. The Saddles can also be used with marble tops to ensure that these fit tightly against the wall or partition without being fastened to or damaging the latter. The top or shelf is easily removed at any time for cleaning.

In ordering, specify pattern of Radiator.

PRICE per pair (R. & L.H.) complete 4s. 6d.

## Fixed Radiator Saddles

In ordering, specify pattern of Radiator.

PRICE per pair .. .. 2s. 3d.



## RADIATOR SUNDRIES

## Solid High Legs



Radiators can be supplied with end sections having solid high legs as follows :

Ideal Neo-Classic Nos. 4 and 6 (excepting 13-in.), to give a distance from floor to centre of bottom tapping of 6 or 8 inches.

Ideal Neo-Hospital, 5 $\frac{3}{4}$ -in. and 7 $\frac{1}{4}$ -in. widths to give a distance from floor to centre of bottom tapping of 6, 8 or 10 inches.

PRICE per Radiator .. .. 4s. 6d.

## Pedestals

For Neo-Classic Nos. 4 and 6, and Neo-Hospital 5 $\frac{3}{4}$  and 7 $\frac{1}{4}$  in. widths.

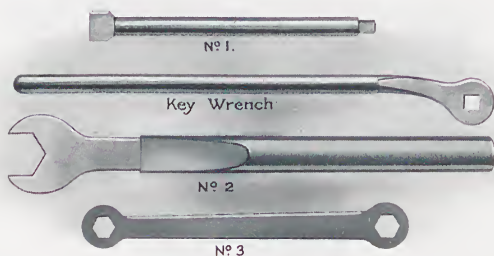
## Price per Set of Four

$\frac{1}{2}$ , 1 and 1 $\frac{1}{2}$ ins.	2/-	4 ins. .. ..	2/11
2 ins. .. ..	2/2	5 „ .. ..	3/4 $\frac{1}{2}$
2 $\frac{1}{2}$ „ .. ..	2/5 $\frac{1}{2}$	6 „ .. ..	3/7
3 „ .. ..	2/7 $\frac{1}{2}$	7 „ .. ..	4/0 $\frac{1}{2}$
3 $\frac{1}{2}$ „ .. ..	2/7 $\frac{1}{2}$	8 „ .. ..	5/-



# RADIATOR SUNDRIES

## Wrenches



### No. 1 Radiator Nipple Wrenches

Length	ins.	6	12	14	18	19	24	36
$\frac{3}{4}$ -in. for Nos. 35, 36 & 36A Rayrad .. ..		—	—	3/-	—	—	—	—
1-in. ,, Ideal Rayrad .. ..		—	—	—	—	3/3	—	—
1-in. ,, Neo-Classic No. 2, Nos. 4 and 6 (24 and 18-in.) and Neo-Hospital (3-in.)		2/6	—	—	3/3	—	—	—
1-in. for Classic Wall .. ..			—	—	—	3/3	—	—
$1\frac{1}{4}$ -in. ,, Neo-Classic Nos. 4 & 6 (36, 30 & 13-in.) and Neo-Hospital ( $5\frac{3}{4}$ and $7\frac{1}{4}$ -in.)		1/6	1/9	—	2/3	—	2/6	3/3
$1\frac{1}{2}$ -in. for Plain Wall .. ..			—	—	2/9	—	3/-	—

Key Wrench for No. 1, for Neo-Classic No. 2, Nos. 4 and 6 (18 and 24-in.), and Neo-Hospital (3-in.) ..	each	10/3
Key Wrench for No. 1, for Neo-Classic Nos. 4 and 6 (30 and 36-in.) and Neo-Hospital ( $5\frac{3}{4}$ and $7\frac{1}{4}$ -in.) ..	..	10/3
No. 2, $1\frac{1}{2}$ -in. for Excelsior hexagon nipples .. ..	..	21/-
.. 2 $\frac{1}{2}$ -in. ,, Vento .. ..	..	29/6
No. 3, for plugs and bushings of Neo-Classic No. 2, Nos. 4 and 6 (18 & 24-in.), Neo-Hospital (3-in.), and Classic Wall .. ..	..	7/6
No. 3, for plugs and bushings of Neo-Classic Nos. 4 and 6 (30 and 36-in.) and Neo-Hospital ( $5\frac{3}{4}$ and $7\frac{1}{4}$ -in.) ..	..	8/-

# IDEAL ENAMELS AND BRONZES

## Enamels

Stocked in White, Cream, Dark (Jacobean) Oak and Black.

Supplied in any other shades or colours to match decorations.

					1 gal.	$\frac{1}{2}$ gal.	$\frac{1}{4}$ gal.	1 pt.
PRICE .. .. .	..	..	..	..	24/3	13/-	7/-	4/-
Ideal Priming Paint*	..	..	..	..	19/7	11/6	6/-	3/2

\* Stocked in White and Grey ; any other shade supplied.

One gallon of Ideal Enamel or Priming Paint will cover 300 to 500 square feet, one coat, dependent upon the method of application. To obtain the best results, two coats of enamel are necessary with the dark and medium, and three coats with the light colours. A coat of " Ideal " Priming Paint should first be applied, allowing this to dry thoroughly before enamelling or bronzing.

## Bronzes

COLOURS—Gold, Copper, Fire, Green and Old Penny in 1-lb., and Aluminium in  $\frac{1}{4}$ -lb. tins.

Bronze Powder		Bronzing Liquid			
Colour	PRICE per lb.	No. of Tin	PRICE	Sufficient for	
				Aluminium	Other Colours
Gold, Copper,		1	14/6	1 lb.	4 lb.
Fire and Green	6/3	2	8/-	$\frac{1}{2}$ "	2 "
Old Penny ..	8/6	3	4/7	$\frac{1}{4}$ "	1 "
Aluminium ..	6/9	4	2/8	$\frac{1}{8}$ "	$\frac{1}{2}$ "

One pound of Powder (except Aluminium) mixed with the liquid will cover about 200 square feet of radiation, one coat ; 1 lb. of Aluminium Powder will cover about 600 square feet of radiation.

*Card showing colours of Bronzes sent on application.*

It should be noted that the use of *any metallic (bronze)* paint reduces the heat emission ; enamels or other paints should preferably be used.

## Enamel Brushes

For Ideal Enamels and Bronzes



Nos. 00 and 0.



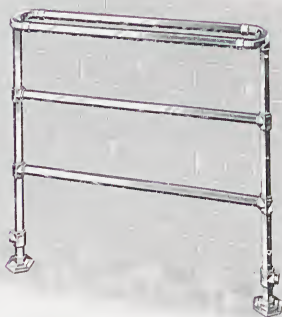
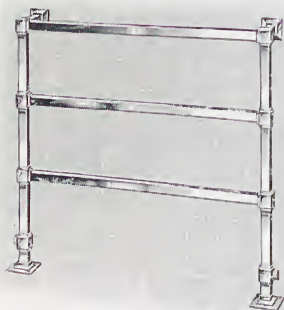
For Neo-Classic Radiators.

Size No. 00 .. .. .	..	..	..	..	..	PRICE, each	1/8
" " 0 .. .. .	..	..	..	..	..	" "	2/-
Enamel Brush for Ideal Neo-Classic Radiators ..	..	..	..	..	..	" "	1/3

# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



No. S-1A.

No. S-1 is without Wall Supports.

No. H-2.

No.	Size of Tube	Height to Centre of Top Tube. Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	PRICES Chromium-plated		
				£	s.	d.
H-1 (Hexagonal) . .	1 1/4" {	3 0	2 6	5	8	3
		3 0	3 0	5	12	0
		3 0	3 6	5	15	6
H-1A   ,,       ..	1 1/4" {	3 0	2 6	6	3	9
		3 0	3 0	6	7	3
		3 0	3 6	6	11	0
H-2       ,,       ..	1 1/4" {	3 0	2 6	6	14	9
		3 0	3 0	6	19	9
		3 0	3 6	7	4	9
S-1 (Square)   ..	1 1/4" {	3 0	2 6	5	17	3
		3 0	3 0	6	0	9
		3 0	3 6	6	4	3
S-1A   ,,       ..	1 1/4" {	3 0	2 6	6	15	0
		3 0	3 0	6	18	6
		3 0	3 6	7	2	3
S-2       ,,       ..	1 1/4" {	3 0	2 6	7	6	9
		3 0	3 0	7	11	9
		3 0	3 6	7	16	9

Width of wall plates, 3 ins. Width of floor flanges, 3 3/4 ins.

Distance from floor to centre of tappings, 4 ins. Outside width of top rails, Nos. H-2 and S-2, 6 3/4 ins. Distance from wall to centre of tube, H-1A and S-1A, 6 ins.

Tappings, 3/4-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

Connections facing inwards supplied at the same prices.

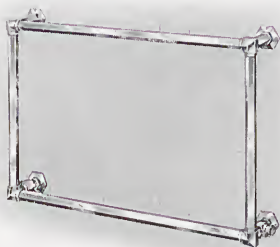
Sizes and patterns not listed, quoted for against specification.



## IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



**No. H-4.**

No. H-4A has centre rail.



**No. S-4A.**

No. S-4 is without centre rail.

No.	Size of Tube	Height Centre to Centre of Tubes	Length Centre to Centre of Tubes	PRICES Chromium- plated		
		Ft. ins.	Ft. ins.	£	s.	d.
H-4 (Hexagonal)	1 $\frac{1}{4}$ " {	2 0	3 0	5	5	3
		2 6	3 0	5	7	9
H-4A    „    ..	1 $\frac{1}{4}$ " {	2 0	3 0	6	9	0
		2 6	3 0	6	11	6
S-4 (Square)    ..	1 $\frac{1}{4}$ " {	2 0	3 0	5	12	3
		2 6	3 0	5	14	9
S-4A    „    ..	1 $\frac{1}{4}$ " {	2 0	3 0	6	19	0
		2 6	3 0	7	1	6

Width of wall plates, 3 ins.

Wall to centre of tappings, 2 $\frac{3}{4}$  ins.; wall to centre of tubes, 6 ins.

Tappings,  $\frac{3}{4}$ -in. unless otherwise ordered. Fitted with flush airvent, see page 70.

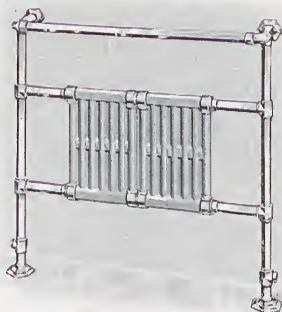
Connections facing inwards supplied at the same prices.

*Sizes and patterns not listed, quoted for against specification.*

# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



Nos. S-13A and S-13B

Nos. H-19A and H-19B

No.	Size of Tube	Height to Centre of Top Tube Ft. ins.	Length to Centre of Tubes Ft. ins.	No. of Radiator Sections	Heating Surface Sq. ft.	PRICES *Chromium-plated		
						£	s.	d.
H-13A (Hexagonal)	1 1/4" {	3 0	2 6	2	10.4	8	3	0
	3 0	3 0	3 0		10.9	8	6	6
H-13B        ,,	1 1/4" {	3 0	2 6	2	10.4	8	14	0
	3 0	3 0	3 0		(Rustless)† 10.9	8	17	6
H-19A        ,,	1 1/4" {	3 0	2 6	2	10.7	9	1	3
	3 0	3 0	3 0		11.3	9	5	0
H-19B        ,,	1 1/4" {	3 0	2 6	2	10.7	9	12	3
	3 0	3 0	3 0		(Rustless)† 11.3	9	16	0
S-13A (Square) ..	1 1/4" {	3 0	2 6	2	11.1	8	11	9
	3 0	3 0	3 0		11.7	8	15	3
S-13B        ,,        ..	1 1/4" {	3 0	2 6	2	11.1	9	2	9
	3 0	3 0	3 0		(Rustless)† 11.7	9	6	3
S-19A        ,,        ..	1 1/4" {	3 0	2 6	2	11.6	9	11	6
	3 0	3 0	3 0		12.2	9	15	3
S-19B        ,,        ..	1 1/4" {	3 0	2 6	2	11.6	10	2	6
	3 0	3 0	3 0		(Rustless)† 12.2	10	6	3

\* Except radiator sections, which are silver cellulose sprayed.

† Bower-barffed.

Width of floor flanges, 3 3/4 ins. Width of wall plates, 3 ins.

Floor to centre of tappings, 4 ins.

Wall to centre of tappings, Nos. H. & S-19A and B, 4 1/4 ins.

Wall to centre of top tube, Nos. H & S-19A and B, 7 ins.

Tappings, 3/4 in, unless otherwise ordered. Fitted with flush airvent, see page 70.

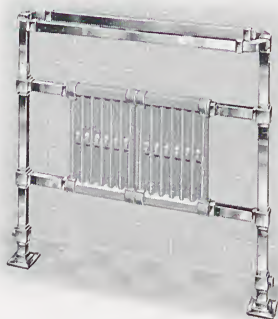
Connections facing inwards supplied at the same prices.

Sizes and patterns not listed, quoted for against specification.

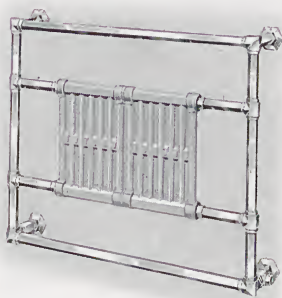
# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



Nos. S-23A and S-23B



Nos. H-24A and H-24B

No.	Size of Tube	Height to Centre of Top Tube Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	No. of Radiator Sections	Heating Surface Sq. ft.	PRICES *Chromium-plated		
						£	s.	d.
H-23A (Hexagonal)	1 1/4" {	3 0 3 0	2 6 3 0	2	12·0	9	3	3
					12·7	9	7	0
H-23B     ,,	1 1/4" {	3 0 3 0	2 6 3 0	2 (Rustless)†	12·0	9	14	3
					12·7	9	18	0
H-24A     ,,	1 1/4" {	2 6 2 6	3 0 3 0	2 2 (Rustless)†	12·3	9	16	9
H-24B     ,,					12·3	10	7	9
S-23A (Square) . .	1 1/4" {	3 0 3 0	2 6 3 0	2	12·8	9	14	6
					13·6	9	18	3
S-23B     ,,     ..	1 1/4" {	3 0 3 0	2 6 3 0	2 (Rustless)†	12·8	10	5	6
					13·6	10	9	3
S-24A     ,,     ..	1 1/4" {	2 6 2 6	3 0 3 0	2 2 (Rustless)†	13·1	10	8	0
S-24B     ,,     ..					13·1	10	19	0

\* Except radiator sections, which are silver cellulose sprayed.

† Bower-barffed.

Width of floor flanges, 3 3/4 ins. ; wall plates, 3 ins.

Outside width of top rails, Nos. H & S-23A and B, 6 3/4 ins.

Floor to centre of tappings, Nos. H & S-23A and B, 4 ins.

Wall to centre of tappings, Nos. H & S-24A and B, 2 3/4 ins. Wall to centre of tubes, 6 ins.

Tappings, 3/4-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

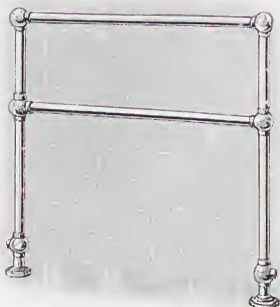
Connections facing inwards supplied at the same prices.

*Prices of special sizes on application.*

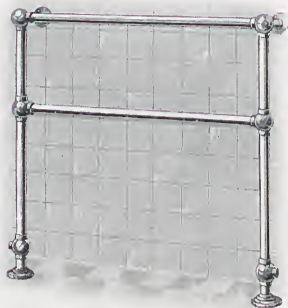
# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



No. 0



No. 0A, with wall supports.

No.	Diam. of Tube	Height to Centre of Top Tube Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	Chromium-plated					
				18 gauge			16 gauge		
				£	s.	d.	£	s.	d.
0	..	1" }	3 0	2	1	6	2	5	3
			3 0	2	2	6	2	6	6
			3 0	2	3	6	2	7	9
0	..	1¼" }	3 0	2	7	6	2	11	3
			3 0	2	8	9	2	13	0
			3 0	2	10	0	2	14	9
0	..	1½" }	3 0	2	18	0	3	3	3
			3 0	3	0	0	3	5	6
			3 0	3	2	0	3	7	9
0A	..	1" }	3 0	2	8	9	2	13	0
			3 0	2	9	9	2	14	3
			3 0	2	10	9	2	15	6
0A	..	1¼" }	3 0	2	15	6	2	19	0
			3 0	2	16	9	3	0	9
			3 0	2	18	0	3	2	6
0A	..	1½" }	3 0	3	7	3	3	13	0
			3 0	3	9	3	3	15	3
			3 0	3	11	3	3	17	6

Floor to centre of tappings, 4 ins. Wall to centre of rails, No. 0A, 6 ins.

Diameter of floor flanges, 1-in. tube, 3½ ins. ; 1¼-in. tube, 3¾ ins. ; 1½-in tube, 3⅞ ins.

Diameter of wall plates, 3 ins.

Tappings, ¾-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

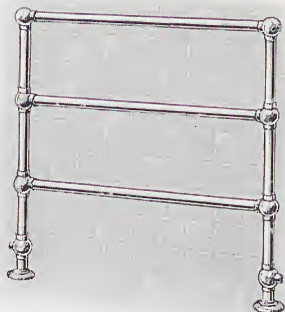
Connections facing inwards supplied at the same prices.

Sizes and patterns not listed, quoted for against specification.

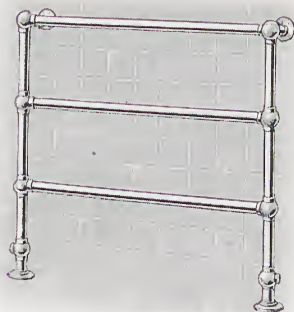
# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



No. 1



No. 1A, with wall supports.

No.	Diam. of Tube	Height to Centre of Top Tube Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	Chromium-plated					
				18 gauge			16 gauge		
				£	s.	d.	£	s.	d.
1	..	1"	3 0	2	11	3	2	15	6
			3 0	2	12	9	2	17	3
			3 0	2	14	3	2	19	0
1	..	1¼"	3 0	2	16	6	3	0	6
			3 0	2	18	3	3	3	0
			3 0	3	0	0	3	5	6
1	..	1½"	3 0	3	10	3	3	16	6
			3 0	3	13	3	4	0	0
			3 0	3	16	3	4	3	6
1A	..	1"	3 0	2	19	3	3	4	6
			3 0	3	0	9	3	6	3
			3 0	3	2	3	3	8	0
1A	..	1¼"	3 0	3	4	9	3	9	0
			3 0	3	6	6	3	11	6
			3 0	3	8	3	3	14	0
1A	..	1½"	3 0	4	0	3	4	6	9
			3 0	4	3	3	4	10	3
			3 0	4	6	3	4	13	9

Floor to centre of tappings, 4 ins. Wall to centre of rails, No. 1A, 6 ins.

Diameter of floor flanges, 1-in. tube, 3½ ins. ; 1¼-in. tube, 3¾ ins. ; 1½-in. tube, 3⅞ ins.

Diameter of wall plates, 3 ins.

Tappings, ¾-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

Connections facing inwards supplied at the same prices.

Sizes and patterns not listed, quoted for against specification.

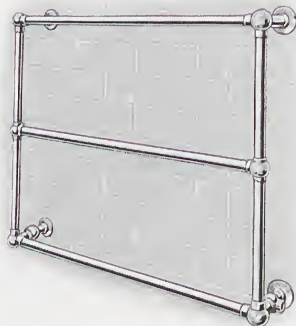
# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



No. 2



No. 4A

No. 4 is without centre rail.

No.	Diam. of Tube	Height to Centre of Top Tube Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	Chromium-plated					
				18 gauge			16 gauge		
				£	s.	d.	£	s.	d.
2	1"	}	3 0	2 6	3 2 3	3 6 6	3 6 6	3 9 3	3 12 0
			3 0	3 0	3 4 3	3 9 3	3 9 3	3 9 3	3 12 0
			3 0	3 6	3 6 3	3 12 0	3 12 0	3 12 0	3 12 0
2	1 1/4"	}	3 0	2 6	3 9 3	3 13 9	3 13 9	3 17 6	3 17 6
			3 0	3 0	3 12 0	3 17 6	3 17 6	3 17 6	3 17 6
			3 0	3 6	3 14 9	4 1 3	4 1 3	4 1 3	4 1 3
2	1 1/2"	}	3 0	2 6	4 9 3	4 15 3	4 15 3	5 0 3	5 0 3
			3 0	3 0	4 13 3	5 0 3	5 0 3	5 0 3	5 0 3
			3 0	3 6	4 17 3	5 5 3	5 5 3	5 5 3	5 5 3
4	1"	}	2 0	3 0	2 10 3	2 14 3	2 14 3	2 15 6	2 15 6
			2 6	3 0	2 11 3	2 15 6	2 15 6	2 15 6	2 15 6
4	1 1/4"	}	2 0	3 0	2 18 3	3 2 6	3 2 6	3 4 3	3 4 3
			2 6	3 0	2 19 6	3 4 3	3 4 3	3 4 3	3 4 3
4A	1"	}	2 0	3 0	3 0 3	3 5 6	3 5 6	3 6 9	3 6 9
			2 6	3 0	3 1 3	3 6 9	3 6 9	3 6 9	3 6 9
4A	1 1/4"	}	2 0	3 0	3 10 0	3 15 0	3 15 0	3 15 0	3 15 0
			2 6	3 0	3 11 3	3 16 9	3 16 9	3 16 9	3 16 9

Diameter of floor flanges, 1-in. tube, 3 5/8 ins. ; 1 1/4-in. tube, 3 3/4 ins. ; 1 1/2-in. tube, 3 7/8 ins.

Diameter of wall plates, 3 ins. Floor to centre of tappings, No. 2, 4 ins.

Wall to centre of tappings, Nos. 4 and 4A, 2 3/4 ins.

Outside width of top rails, No. 2, 1-in. and 1 1/4-in. tubes, 6 3/4 ins. ; 1 1/2-in. tubes, 7 1/8 ins.

Nos. 4 and 4A, wall to centre of tube, 6 ins.

Tappings, 3/4-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

Connections facing inwards supplied at the same prices.

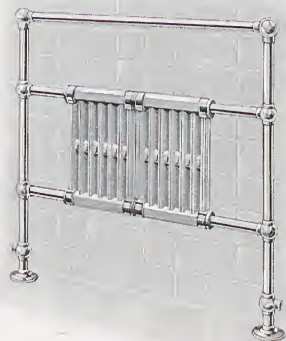
Sizes and patterns not listed, quoted for against specification.



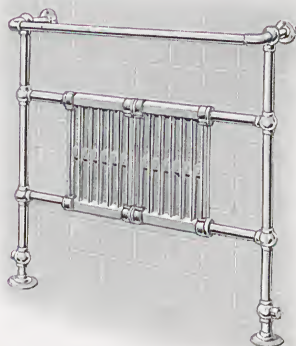
# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



Nos. 13A—13B



Nos. 19A—19B

No.	Diam. of Tube	Height to Centre of Top Tube Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	Number of Radiator Sections	Heating Surface Sq. ft.	PRICES		
						*Chromium-plated		
						£	s.	d.
13A	1 1/4"	3 0	2 6	2	10.0	4	12	3
		3 0	3 0		10.5	4	15	9
		3 0	3 6		11.0	4	19	3
13B	1 1/4"	3 0	2 6	2 (Rustless)†	10.0	5	3	3
		3 0	3 0		10.5	5	6	9
		3 0	3 6		11.0	5	10	3
19A	1 1/4"	3 0	2 6	2	10.4	5	0	3
		3 0	3 0		10.9	5	3	9
		3 0	3 6		11.4	5	7	3
19B	1 1/4"	3 0	2 6	2 (Rustless)†	10.4	5	11	3
		3 0	3 0		10.9	5	14	9
		3 0	3 6		11.4	5	18	3

\* Except radiator sections, which are silver cellulose sprayed.

† Bower-barfied.

Diameter of floor flanges, 4 ins. ; wall plates, 3 ins.

Floor to centre of tapings, 4 ins.

Nos. 19A and B, wall to centre of tapings, 4 1/4 ins. ; wall to centre of top rail, 7 ins.

Tapings, 3/4-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

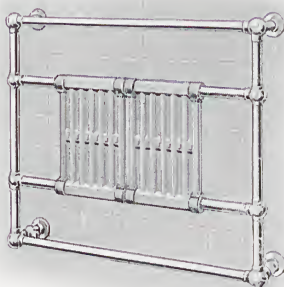
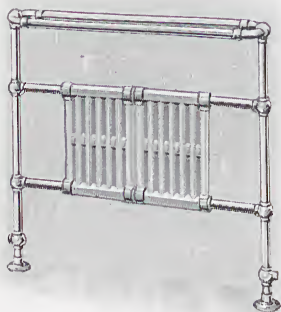
Connections facing inwards supplied at the same prices.

*Prices of special sizes on application.*

# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



Nos. 23A—23B

Nos. 24A—24B

No.	Diam. of Tube	Height to Centre of Top Tube	Length Centre to Centre of Tubes	Number of Radiator Sections	Heating Surface	PRICES		
		Ft. ins.	Ft. ins.			*Chromium-plated	£	s. d.
23A	1 1/4"	3 0	2 6	2	11.0	5 0 9		
		3 0	3 0		11.7	5 5 6		
		3 0	3 6		12.2	5 10 3		
23B	1 1/4"	3 0	2 6	2 (Rustless)†	11.0	5 11 9		
		3 0	3 0		11.7	5 16 6		
		3 0	3 6		12.2	6 1 3		
24A	1 1/4"	2 6	3 0	2	11.5	5 16 3		
24B	1 1/4"	2 6	3 0	2 (Rustless)†	11.5	6 7 3		

\* Except Radiator sections, which are silver cellulose sprayed. † Bower-barffed.

Diameter of floor flanges, 4 ins. ; wall plates, 3 ins.

Outside width of top rails, Nos. 23A and B, 6 3/4 ins.

Floor to centre of tappings, Nos. 23A and B, 4 ins.

Nos. 24A and B, wall to centre of tappings, 2 3/4 ins. ; wall to centre of tubes, 6 ins.

Tappings, 3/4-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

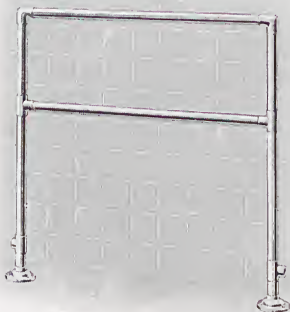
Connections facing inwards supplied at the same prices.

*Prices of special sizes on application.*

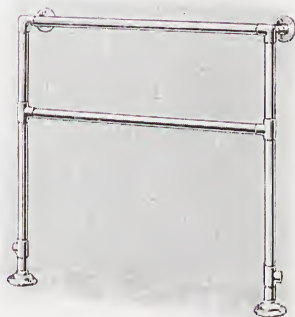
# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



No. P-0



No. P-0A, with wall supports.

No.	Diam. of Tube	Height to Centre of Top Tube Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	Chromium-plated					
				18 gauge			16 gauge		
				£	s.	d.	£	s.	d.
P-0	1"	{	3 0	2 6	1 17	9	2 1	3	
			3 0	3 0	1 18	9	2 2	6	
			3 0	3 6	1 19	9	2 3	9	
P-0	1¼"	{	3 0	2 6	2 2	0	2 4	6	
			3 0	3 0	2 3	3	2 6	3	
			3 0	3 6	2 4	6	2 8	0	
P-0	1½"	{	3 0	2 6	2 11	0	2 16	0	
			3 0	3 0	2 13	0	2 18	3	
			3 0	3 6	2 15	0	3 0	6	
P-0A	1"	{	3 0	2 6	2 3	9	2 8	0	
			3 0	3 0	2 4	9	2 9	3	
			3 0	3 6	2 5	9	2 10	6	
P-0A	1¼"	{	3 0	2 6	2 8	3	2 11	9	
			3 0	3 0	2 9	6	2 13	6	
			3 0	3 6	2 10	9	2 15	3	
P-0A	1½"	{	3 0	2 6	3 0	6	3 6	0	
			3 0	3 0	3 2	6	3 8	3	
			3 0	3 6	3 4	6	3 10	6	

Floor to centre of tapings, 4 ins. Wall to centre of tubes, No. P-0A, 6 ins.  
Diameter of floor flanges, 1-in. tube, 3½-ins. ; 1¼-in. tube, 3¾ ins. ; 1½-in. tube, 3⅞ ins.

Diameter of wall plates, 3 ins.

Tapings, ¾-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

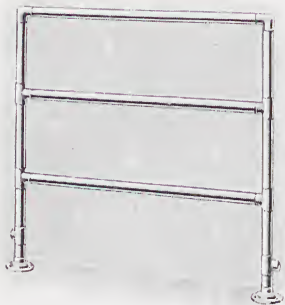
Connections facing inwards supplied at the same prices.

Sizes and patterns not listed, quoted for against specification.

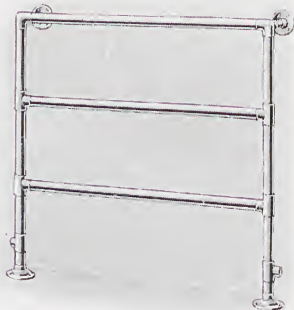
# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



No. P-1



No. P-1A, with wall supports.

No.	Diam. of Tube	Height to Centre of Top Tube Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	Chromium-plated					
				18 gauge			16 gauge		
				£	s.	d.	£	s.	d.
P-1	1"	}	3 0	2	5	0	2	9	9
			3 0	2	6	6	2	11	6
			3 0	2	8	0	2	13	3
P-1	1¼"	}	3 0	2	9	9	2	14	0
			3 0	2	11	6	2	16	6
			3 0	2	13	3	2	19	0
P-1	1½"	}	3 0	3	3	3	3	8	3
			3 0	3	6	0	3	11	9
			3 0	3	9	0	3	15	3
P-1A	1"	}	3 0	2	11	0	2	16	0
			3 0	2	12	6	2	17	9
			3 0	2	14	0	2	19	6
P-1A	1¼"	}	3 0	2	17	0	3	1	3
			3 0	2	18	9	3	3	9
			3 0	3	0	6	3	6	3
P-1A	1½"	}	3 0	3	12	0	3	18	3
			3 0	3	15	0	4	1	9
			3 0	3	18	0	4	5	3

Floor to centre of tappings, 4 ins. Wall to centre of tubes, No. P-1A, 6 ins.  
Diameter of floor flanges, 1-in. tube, 3<sup>5</sup>/<sub>8</sub> ins.; 1¼-in. tube, 3<sup>3</sup>/<sub>4</sub> ins.; 1½-in. tube, 3<sup>7</sup>/<sub>8</sub> ins.  
Diameter of wall plates, 3 ins.

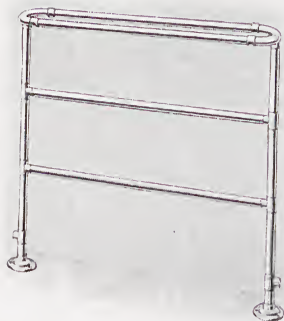
Tappings, ¾-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

Connections facing inwards supplied at the same prices.

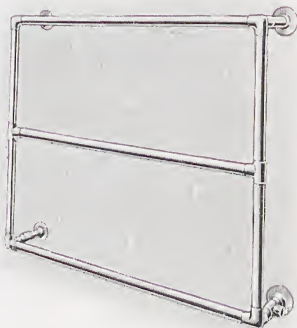
Sizes and patterns not listed, quoted for against specification.

# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel  
Air tested to 80 lb. submerged in Hot Water.



No. P-2



No. P-4A

No. P-4 is without centre tube.

No.	Diam. of Tube	Height to Centre of Top Tube Ft. ins.	Length Centre to Centre of Tubes Ft. ins.	Chromium-plated					
				18 gauge			16 gauge		
				£	s.	d.	£	s.	d.
P-2	1"	{	3 0	2	14	6	2	19	3
			3 0	2	16	6	3	2	0
			3 0	2	18	6	3	4	9
P-2	1¼"	{	3 0	3	3	6	3	8	0
			3 0	3	6	3	3	11	9
			3 0	3	9	0	3	15	6
P-2	1½"	{	3 0	4	1	3	4	6	0
			3 0	4	5	3	4	12	0
			3 0	4	9	3	4	18	0
P-4	1"	{	2 0	2	3	6	2	7	6
			2 6	2	4	6	2	8	9
P-4	1¼"	{	2 0	2	10	6	2	15	0
			2 6	2	11	9	2	15	9
P-4A	1"	{	2 0	2	10	9	2	15	9
			2 6	2	11	9	2	17	0
P-4A	1¼"	{	2 0	2	17	6	3	4	3
			2 6	2	18	9	3	6	0

Diameter of floor flanges, 1-in. tube, 3½ ins. ; 1¼-in. tube, 3¾ ins. ; 1½-in. tube, 3⅞ ins.

Diameter of wall plates, 3 ins.

Floor to centre of tappings, No. P-2, 4 ins.

Wall to centre of tappings, Nos. P-4 and P-4A, 2¾ ins.

Outside width of top rails, No. P-2, 1-in. and 1¼-in. tubes, 6¾ ins. ; 1½-in. tube, 7⅛ ins.

Nos. P-4 and P-4A, wall to centre of tube, 6 ins.

Tappings, ¾-in. unless otherwise ordered. Fitted with flush airvent, see page 70.

Connections facing inwards supplied at the same prices.

Sizes and patterns not listed, quoted for against specification.

# IDEAL TOWEL RAILS

Solid-drawn Brass—Chromium-plated on Nickel

Air tested to 80 lb. submerged in Hot Water.



**No. H-11.**

No. S-11 has square tubes.

No.	Size of Tube	Length Ft. ins.	Chromium-plated		
			£	s.	d.
H-11 .. .. .	1 1/4"	3 0	1	16	0
† H-11 (Circulating) ..	1 1/4"	3 0	2	0	3
S-11 .. .. .	1 1/4"	3 0	1	15	6
† S-11 (Circulating) ..	1 1/4"	3 0	1	19	6

† Circulating type with connections allowed for through wall plates. Outside connections if required, extra hexagonal, 5s. 6d. ; square, 7s. 3d. Specify type of rail required.



**No. P-11**

No. 11 has ball fittings.

No.	Dian. of Tube	Length Ft. ins.	PRICES Chromium-plated					
			18 gauge			16 gauge		
			£	s.	d.	£	s.	d.
11 .. .. .	1"	3 0	19	9		1	1	3
* 11 (Circulating) ..		3 0	1	2	6	1	4	0
11 .. .. .	1 1/4"	3 0	1	2	3	1	3	9
* 11 (Circulating) ..		3 0	1	5	3	1	6	9
P-11 .. .. .	1"	3 0	17	9		19	3	
* P-11 (Circulating)		3 0	1	0	6	1	1	9
P-11 .. .. .	1 1/4"	3 0	1	0	3	1	1	6
* P-11 (Circulating)		3 0	1	3	0	1	4	6

\* With circulating type connections are allowed for through wall plates. Outside connections if required, extra 2s. 0d. Specify type of rail required.

Diameter of wall plates, 3 ins. Distance from wall to centre of tube, 6 ins.

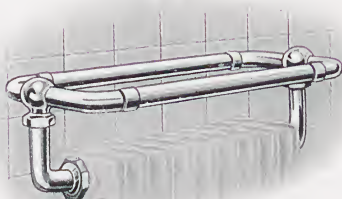
Unless otherwise ordered, Circulating Towel Rails are tapped for 3/4-in. pipe. They are also provided with flush airvent, see page 70.



# IDEAL TOWEL RAILS

**Solid-drawn Brass—Chromium-plated on Nickel**

Air tested to 80 lb. submerged in Hot Water.



**No. 6**

Diam. of Tube	For Radiator	No. of Sections in Radiator	PRICES					
			Chromium-plated					
			18 gauge			16 gauge		
			£	s.	d.	£	s.	d.
1"	Nos. 2 & 4 Neo-Classic ..	10	2	17	9	2	19	9
	3-in. and 5 $\frac{3}{4}$ -in. Neo-Hospital .. ..	10	2	17	9	2	19	9
	No. 6 Neo-Classic ..	10	3	2	6	3	4	9
	7 $\frac{1}{4}$ -in. Neo-Hospital ..	10	3	2	6	3	4	9
	Per Section extra .. ..			1	3		1	4
1 $\frac{1}{4}$ "	Nos. 2 & 4 Neo-Classic ..	10	3	2	3	3	4	6
	3-in. and 5 $\frac{3}{4}$ -in. Neo-Hospital .. ..	10	3	2	3	3	4	6
	No. 6 Neo-Classic ..	10	3	6	9	3	9	0
	7 $\frac{1}{4}$ -in. Neo-Hospital ..	10	3	6	9	3	9	0
	Per Section extra .. ..			1	4		1	5

Outside width of rails for Neo-Classic Nos. 2 and 4, and Neo-Hospital 3-in. and 5 $\frac{3}{4}$ -in., 9 $\frac{1}{4}$  ins. ; Neo-Classic No. 6 and Neo-Hospital 7 $\frac{1}{4}$ -in., 12 ins.

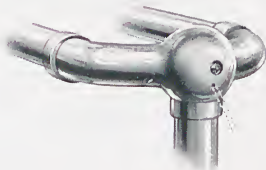
These rails are provided with flush airvent, see page 70.

# TOWEL RAIL SUNDRIES

## Ideal Flush Airvent



Brit. Patent  
Nos. 319493, 328051



Ideal Towel Rails are fitted with this flush airvent, which eliminates projecting aircock and gives a neat appearance.

## Wall Stays

Round, Square or Hexagonal Tube.

To give distances up to 8 inches from wall to centre of tube.

When ordering, state distance required.



Pattern				Chromium-plated on Nickel		
				1-in.	1½-in.	1½-in.
Round	..	..	.. per pair	10/-	10/6	11/-
Hexagonal	..	..	.. " "	—	16/6	—
Square	..	..	.. " "	—	16/6	—

## Split Floor Flanges

To fit round pipe connections to Ideal Towel Rails.



Diameter 2½ ins.

Chromium-plated  
on Nickel

Flanges, Round, for ½-in. and ¾-in. pipe	..	..	2/2
" " 1-in. pipe	..	..	3/4
" Square and Hexagonal, for ¾-in. pipe	..	..	2/7
" " " 1-in. pipe	..	..	3/4

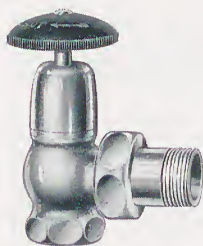


## Easy-Clean Towel Rail Valve

Extra for valve sweated in towel rail leg when rail provided with connections through floor flanges.

Size of Tube			1-in. s. d.	1½-in. s. d.	1½-in. s. d.
Round	..	..	8 6	9 6	10 6
Hexagonal	..	..	—	8 9	—
Square	..	..	—	9 6	—

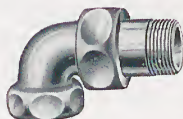
## TOWEL RAIL SUNDRIES



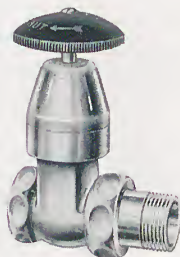
No. 51



No. 60



No. 58



No. 56

No. 51, $\frac{3}{4}$ -in. valve, polished and nickel-plated	..	..	5/8
Extra for chromium-plated finish	..	..	-/10
No. 56, $\frac{3}{4}$ -in. valve, polished and nickel-plated	..	..	6/8
Extra for chromium-plated finish	..	..	-/10
No. 58, $\frac{3}{4}$ -in. union elbow, polished and nickel-plated	..	..	2/8
Extra for chromium-plated finish	..	..	-/3 $\frac{1}{2}$
No. 60, $\frac{3}{4}$ -in. union, polished and nickel-plated	..	..	2/4 $\frac{1}{2}$
Extra for chromium-plated finish	..	..	-/3 $\frac{1}{2}$

## Brass Soldering Unions

For connecting Ideal Towel Rails to lead piping.



Size in inches		$\frac{1}{2}$	$\frac{3}{4}$	1
Straight pattern, rough	.. ..	-/8	1/-	1/5 $\frac{1}{2}$
Bent	.. ..	1/1	1/4	1/9
Extra if polished and nickel-plated	..	-/10	-/11 $\frac{1}{2}$	1/-
„ „ chromium-plated		1/0 $\frac{1}{2}$	1/3	1/3 $\frac{1}{2}$

# IDEAL BOILERS

## Connections and Tappings

The tappings of all Ideal Boilers are screwed British Standard threads, and the number, size and position of the flow and return openings and tappings will be as shown in the tables of dimensions and capacities, unless otherwise ordered. All flanged openings of Britannia, No. 6 "R" Series and Sectional Domestic Boilers are fitted with tapped counterflanges.

All Ideal Sectional Boilers are tapped on the front section for  $\frac{3}{4}$ -in. draw-off, with the following exceptions: Nos. 3 and 4 Britannia, Nos. 3 and 4 "H" Series, 1-in., and No. 6 "R" Series,  $1\frac{1}{2}$ -in. Nos. 1 and 2 Neo-Classic are tapped  $\frac{1}{2}$ -in., and No. 3-GBA Series are tapped 1-in. at back. In addition, the Nos. 0 to 3 Series Britannia Boilers and No. 6 "R" Series have a  $\frac{3}{4}$ -in. tapping, and No. 4 Series Britannia a 1-in. tapping on face of front section in line with top nipples, available for thermometer or thermostat.

Ideal Sectional Boilers are tapped on top of front section with the exception of Ideal Neo-Classic Boilers, which are tapped on top of second section, and No. 3-GBA Series, which are tapped on top of end sections:

	No., Size and Type of Nipples, per section.	
Sect. Domestic, Nos. HW-20 to 60 \ and HWO-40 to 80 }	$1\frac{1}{2}$ and	$\frac{1}{2}$ -in.
" " Nos. HW-3 to 8 \ and HWO-3 to 10 }	$1\frac{1}{2}$ "	$\frac{1}{2}$ "
Neo-Classic, No. 1 Series ..	$1\frac{1}{2}$ "	$\frac{1}{2}$ "
" " No. 2 " ..	$1\frac{1}{2}$ "	$\frac{1}{2}$ "
No. 0-K and 0-KO Britannia		$1-1\frac{1}{2}$ "
No. 1-K " 1-KO " "	$1\frac{1}{2}$ "	1 "
No. 2-K " 2-KO " "	$1\frac{1}{2}$ "	2-1 "
No. 3-K " 3-KO " "	$1-1\frac{1}{2}$ "	$1-\frac{1}{2}$ "
No. 4-K " 4-KO " "	$2-1\frac{1}{2}$ "	$1-\frac{1}{2}$ "
No. 6 "R" Series ..	$2-\frac{1}{2}$ "	$1-2\frac{1}{2}$ "
	$\dagger 1-1\frac{1}{2}$ "	
*No. 1 "H" and 1 "HO" Series	$1\frac{1}{2}$ "	$\frac{1}{2}$ "
*No. 2 "H" " 2 "HO" "	$1\frac{1}{2}$ "	$\frac{1}{2}$ "
*No. 3 "H" " 3 "HO" "	$1\frac{1}{2}$ "	$\frac{1}{2}$ "
*No. 4 "H" " 4 "HO" "	$1\frac{1}{2}$ "	$\frac{1}{2}$ "
Magazine, Nos. 2 and 3 Series. .	$1-1\frac{1}{2}$ "	$2-\frac{1}{2}$ "
Gas, No. 1-DG .. ..	—	—
" No. 2-DG .. ..	—	—
" No. 1-GB Series .. ..	—	—
" No. 2-GB " .. ..	—	—
" No. 3-GBA " .. ..	$1-1\frac{1}{2}$ -in., on each end section	2-6 " push
" No. 3-GBA " (Steam)	5 to 10 sections, $1-2\frac{1}{2}$ -in. and 11 to 13 sections, $2-2\frac{1}{2}$ -in.	

$\dagger$  On back section, R. or L.H. side.

\* In the "H" and "HO" Series Boilers the tapping for Safety Valve is provided in the flow header, viz.: Nos. 1 and 2 Series,  $1\frac{1}{2}$ -in.; Nos. 3 and 4 Series,  $2\frac{1}{2}$ -in. The number of nipples stated is for each half-section.

For all extra outlets or inlets on boilers (except Neo-Classic) regularly tapped 2 ins. there will be a charge of 1s. 6d. each net; over 2 ins., 2s. 6d. each net; Neo-Classic, 1s. 6d. net.

## Rating

The heating power of Ideal Boilers has been determined by exhaustive tests made under average conditions of fuel, firing and draught. The ratings in square feet of radiation are based as follows:

Water—a transmission of 144 B.T.U. per square foot per hour.

Steam—a transmission of 256 B.T.U. per square foot per hour.

4-in. Pipe—a transmission of 185 B.T.U. per lineal foot per hour.

## IDEAL BOILERS

### Noco Doors

Ideal Britannia, Magazine, "H" Series and Sectional Domestic Boilers are provided with patent Noco doors, designed to pre-heat the secondary air supply, air-cool the baffle plates and give ample access for stoking and cleaning. The heated secondary air is of considerable value when the fuel is smaller than normal or of a reactive nature, effecting an appreciable increase of efficiency.

### Water-cooled Grates

The Nos. 2, 3 and 4 Series Britannia, "H" Series and Magazine Boilers all have water-cooled grate bars which cannot burn out; they also increase the efficiency of the boilers by largely eliminating the formation of clinker, and so keeping the free air space of the grate more constant during the firing period.

### Insulating Boilers

Insulating Galvanised Steel Jackets can be supplied for, and in certain series are regularly furnished with, Ideal Boilers as listed.

The jackets of the following Boilers can be fitted after the pipe connections are made: Sectional Domestic, No. 3-GBA, Britannia, 6 "R" and "H" Series.

### Mechanical Stoking

Ideal Britannia, 6 "R" and "H" Series Boilers are suitable for use with mechanical stokers; see pages 76 and 77, 140 and 141.

### Oil Fuel

Ideal Boilers are supplied specially fitted to accommodate oil burners; see pages 96, 97, 100, 101, 132 to 137, 140, 141, and 154 to 158.

### How Boilers are Forwarded

All Ideal Sectional Boilers, with the exception of the Neo-Classic, Nos. 1 & 2-GB and 1 & 2-DG Series Gas Boilers, are despatched unassembled for convenience in handling.

Nos. HW-20 to 60 Sectional Domestic Boilers for coke, and Nos. HWO-40 to 60 for oil, can be despatched assembled when so ordered.

### Instructions for Erecting and Working Ideal Boilers

Full instructions for erection and operation accompany all Ideal Sectional Boilers supplied; further copies can be had on application. See pages 74 and 75 for particulars of Foundations and Ashpits. Special wrenches for assembling Boilers are listed on page 163.

### Enlarging Sectional Boilers

When ordering one or more sections to increase the size of a Sectional Boiler, the following or equivalent wording should be used: "Necessary sections and nipples to enlarge (say) a No. 26-K Britannia Boiler into a No. 28-K." At the same time it should be stated whether jacket extension pieces are required.

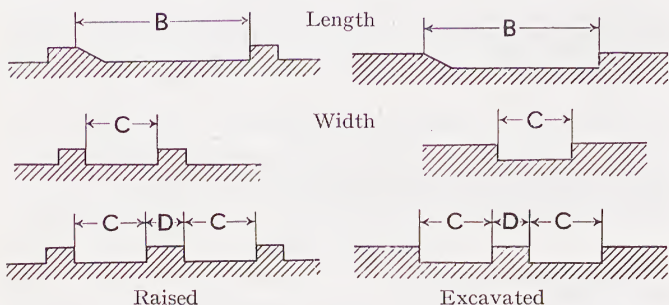
When adding sections it is only necessary to remove either the front or the back section, except in the case of the No. 6 "R" Series, where allowance may require to be made for renewal of certain intermediate sections next to front or back.

In ordering replace parts, the following information will greatly facilitate prompt execution—

- (a) Catalogue number.
- (b) Lettering and foundry serial number on the fire door.
- (c) Date supplied.

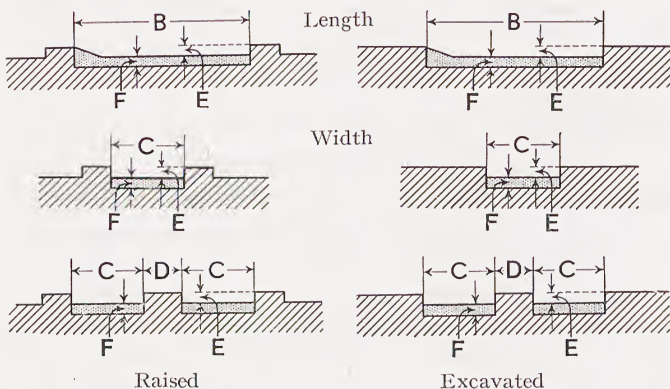
# FOUNDATION AND ASHPIT DIMENSIONS

## BRITANNIA AND "H" SERIES BOILERS

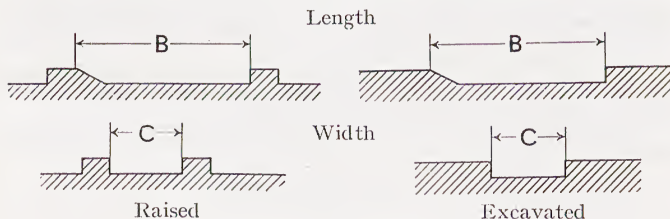


## No. 6 "R" SERIES BOILERS

Solid portion "F" indicates insulating concrete.



## SECTIONAL DOMESTIC BOILERS





# FOUNDATION AND ASHPIT DIMENSIONS

## Britannia Boilers

## "H" Series Boilers

Boiler No.	B Ins.	C Ins.	D Ins.	Boiler No.	B Ins.	C Ins.	D Ins.
03K	11½			1-HN-4	19½		
04K	17½			5	25½		
05K	23½	10½	—	6	31½	16	—
06K	29½			7	37½		
07K	35½			8	43½		
				2-HN-6	31½		
14K	17½			7	37½		
15K	23½			8	43½	18	22
16K	29½	16	—	9	49½		
17K	35½			10	55½		
18K	41½			11	61½		
				3-HN-8	42		
24K	18			9	48		
25K	24			10	54	20	29½
26K	30	21½	—	11	60		
27K	36			12	66		
28K	42			4-HN-8	42		
29K	48			9	48		
				10	54	22	40½
35K	26			11	60		
36K	33			12	66		
37K	40			13	72		
38K	47	31	10¾	14	78		
39K	54			<b>Sectional Domestic Boilers</b>			
310K	61			HW-20	7		
311K	68			30	13		
				40	19	14	—
47K	41			50	25		
48K	48			60	31		
49K	55	38½	13¾	HW-3	14		
410K	62			4	21		
411K	69			5	28	17	—
412K	76			6	35		
413K	83			7	42		
414K	90			8	49		

## No. 6 "R" Series Boilers

	B Ins.	C Ins.	D Ins.	E Ins.	F Ins.
6-R-7	44½				
8	52				
9	59½				
10	67				
11	74½	46	16¾	2	2
12	82			minimum	minimum
13	89½				

**Magazine Boilers :** Dimensioned drawing on application.

Drawing No. 4092A	..	No. 2 Series	..	Raised.
No. 4093A	..	do.	..	Excavated.
No. 4829A	..	No. 3 Series	..	Raised.
No. 4830A	..	do.	..	Excavated.

**No. 3-GBA Gas Boilers :** Dimensioned drawing on application.

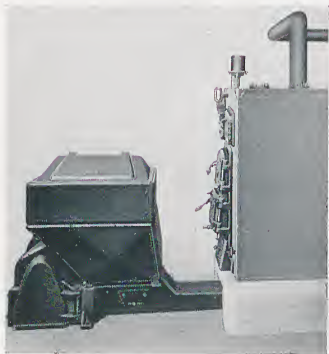
## MECHANICAL STOKING

The accompanying illustrations show how readily Ideal Sectional Boilers can be adapted for use with Mechanical Stokers.

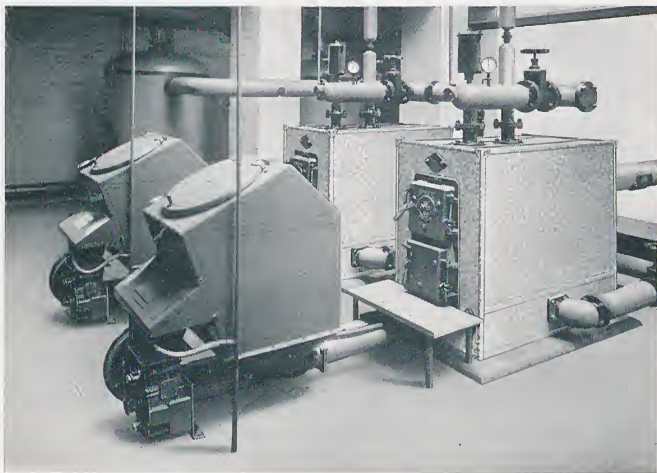
All sections of Ideal Boilers have ground beaded edges which ensure the firebox and flues being smoketight without the use of putty or other filling.

Large fire and flue doors provide easy access for removal of clinker and for cleaning.

When ordering Ideal Boilers suitable for Mechanical Stokers, the make of stoker to be used should be stated, together with a note of any special features required by the stoker manufacturer. Usually the boiler will need to be raised on one or more courses of brickwork. Full particulars of the foundation or other special requirements should be secured from the maker of the stoker before designing the boiler house, or ordering the boiler.

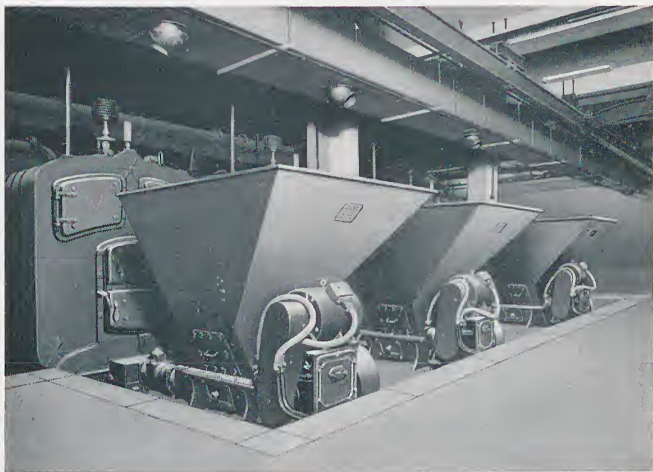


Ideal No. 2-K Britannia Boiler.

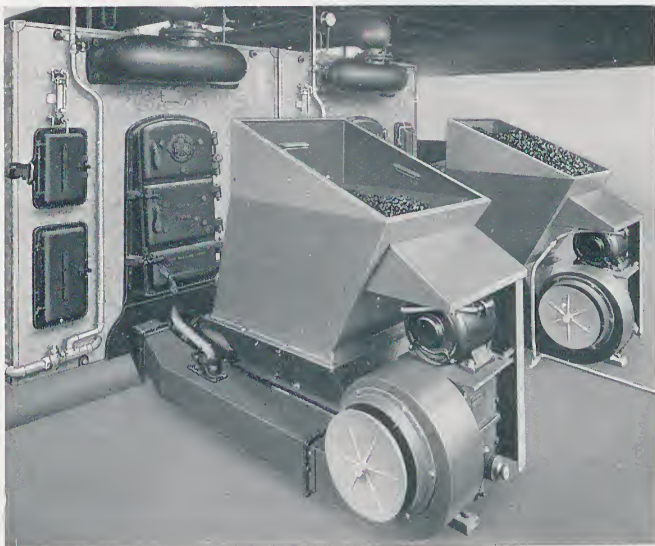


Two Ideal "HW" Series Sectional Domestic Boilers for Direct Hot Water Supply.

## MECHANICAL STOKING



Battery of three Ideal No. 4-K Series Britannia Boilers.



Battery of two Ideal No. 4 " H " Series Boilers.

# IDEAL DOMESTIC GAS BOILERS

Nos. 1 and 2-DG

For Direct Hot Water Supply



No. 1-DG.



No. 2-DG

No.	B.T.U. per hour	*Gas Con- sump- tion. Cu. ft. per hr.	Equivalent Gallons per hour		Approx. Tank Size Gals.	PRICE			Extra if Boiler Rustless†	
			40-120°	40-140°		£	s.	d.	s.	d.
1-DG	20,000	54	25.0	20	25-30	12	10	0	29	0
2-DG	30,000	80	37.5	30	30-40	14	0	0	38	6

\* Calculated at 500 B.T.U. gross value per cubic foot. Consumption at other values can be computed on the basis of a boiler efficiency equal to 75% of the gross calorific value of the gas.

**State calorific value of gas when ordering. If not stated, a value of 450/500 will be assumed.**

† Bower-barffed.

## Standard Finish and Fittings

Top-plate, Front panel and Baseplate vitreous enamelled in Black.  
Jacket (insulated) vitreous enamelled in Grey Mottle.

**Diverter**, black vitreous enamelled, and **Gas Governor**.

Heat Indicator.

Gas Control Valve and Thermostat complete with dull nickel-plated copper tube connections.

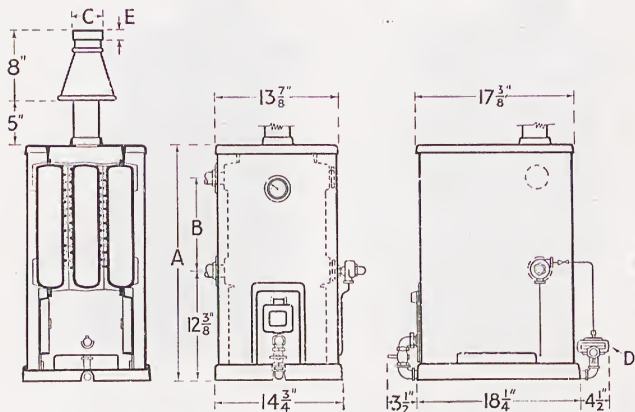
Chromium-plated Gas Cock with pipe connection to Control Valve.

½-in. Draw-off Cock, extra, 4s. 0d., supplied unless otherwise ordered.

# IDEAL DOMESTIC GAS BOILERS

Nos. 1 and 2-DG

For Direct Hot Water Supply



No.	Dimensions in inches					No. and Size of Cleanout open- ings at back only Ins.	Tappings §	
	A	B	C*	D†	E		Flow Ins.	Return Ins.
1-DG	22 $\frac{3}{4}$	6 $\frac{3}{4}$	3	$\frac{1}{2}$	1	3-2 $\frac{1}{2}$	1 $\frac{1}{2}$	1 $\frac{1}{2}$
2-DG	26 $\frac{1}{4}$	10 $\frac{3}{16}$	3	$\frac{1}{2}$	1	6-2	1 $\frac{1}{2}$	1 $\frac{1}{2}$

\* Socket Outlet, suitable for spigot end of 3-in. asbestos cement flue pipe.

† The size of Control Valve and Governor also indicates the size of gas supply, except where the distance between meter and boiler exceeds about 20 ft., when it is necessary to use supply pipe of the next larger diameter.

§ Unless otherwise ordered, flow and return tappings will be provided at L.H. side. R.H. connections can be supplied to order with Thermostat at L.H. side.

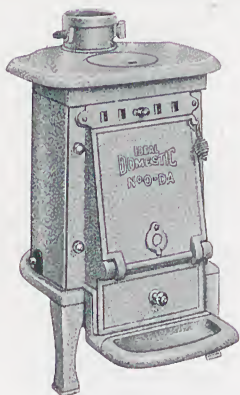
For particulars and prices of Clock Control, see page 174.



## IDEAL OPEN FIRE DOMESTIC BOILERS

Brit. Regd. Design No. 786163. Brit. Patent No. 413885

### For Hot Water Supply



Vitreous Enamelled, with Side Jackets.



Black painted finish.

No.	Water Contents  Gals.	Hot Water Supply only			Approx. Tank Size  Gals.
		B.T.U. per hour	Gals. per hour		
			40°-120°	40°-140°	
0-DA	2½	20,000	25	20	25-30

No.	Fuel Capacity Cu. ft.	Heating Surface Sq. ft.	PRICE complete with baseplate								
			All Black finish			*Vitřeous Enamelled			†Extra if Boiler Rustless		
			£	s.	d.	£	s.	d.	£	s.	d.
0-DA	0.5	2	3	3	0	3	16	6	1	5	0

\* Grey, Green or Blue Mottle, boiler body painted plain Grey.

Cream enamelled front platework, with top plate, smokehood and baseplate enamelled Black, extra, price on application.

When ordering specify Grey, Green or Blue Mottle, or Cream, otherwise ordinary Black finish (not enamelled) will be supplied.

† Bower-barffed.

Side Jackets, per pair, Mottle enamelled .. ..	5s. 4d.
Stoking Tools .. 1s. 5d. Draw-off Cock, $\frac{1}{2}$ in. ..	4s. 0d.
Cleaning Chisel .. 6s. 3d. Draw-off Plug .. ..	1s. 10d.
Spring Safety Valve, $\frac{1}{2}$ -in. or $\frac{3}{4}$ -in. ... ..	3s. 9d.
Gas Poker (see page 107) .. .. .	4s. 6d.

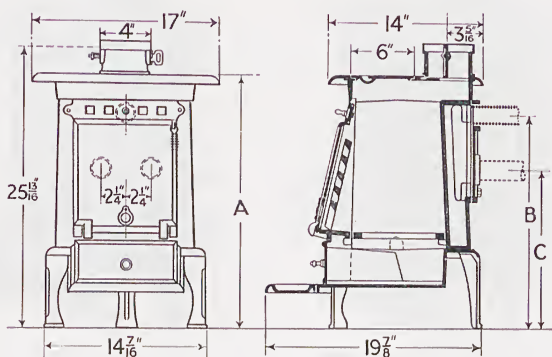
Stoking Tools (p. 159) and **Draw-off Cock** (p. 177) supplied unless otherwise ordered.



# IDEAL OPEN FIRE DOMESTIC BOILERS

Brit. Regd. Design No. 786163. Brit. Patent No. 413885

For Hot Water Supply



Smoke Outlet suitable for spigot end of 4-in. cast iron smokepipe.

## Dimensions in Inches

No.	Height to Top Plate	Height to Centre of Flow	Height to Centre of Return	Number and Size of	
	A	B	C	*Tappings Flow-and Return	Clean-out Opening
	Ins.	Ins.	Ins.	Ins.	Ins.
0-DA	23 $\frac{13}{16}$	20 $\frac{3}{8}$	15 $\frac{1}{8}$	1-1 $\frac{1}{4}$	1-8 × 6 $\frac{1}{2}$

\* In clean out cover at back. Return tapping can be to right or left of centre.

Smokepipe and Elbows should not be less than size of smoke outlet. Where independent cast iron chimney is used, 6 ins. is minimum size.

Where the Smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). Price, 4-in., 1s. 8d. ; Mottle or Black enamelled, 2s. 5d.

4  $\frac{1}{2}$ -in. smoke outlet can be supplied if specially ordered.

For particulars and prices of smokepipe, elbows, etc., in enamel finish, see pages 160 and 161.

# IDEAL OPEN FIRE DOMESTIC BOILERS

For Hot Water Supply



Vitreous Enamelled, with Side Jackets and Baseplate.



In Black finish, with Baseplate and Gas Poker.

No.	Capacity		Hot Water Supply only			Approx. Tank Size Gals.
	Water Gals.	Fuel Cu. ft.	B.T.U. per hour	Gals. per hour		
				40°-120°	40°-140°	
00	3½	0.49	20,000	25	20	25-30

No.	Heating Surface Sq. ft.	Heating only		PRICES					
		B.T.U. per hour	Direct Radiation Sq. ft.	Black, with Polished Top			*Vitreous Enamelled		
				£	s.	d.	£	s.	d.
00	2	8,800	60	3	16	6	4	17	3
									† Extra if Boiler Rustless
									£ s. d.
									1 7 6

\* Grey, Green or Blue Mottle, boiler body painted plain Grey.

Cream enamelled front platework, with top plate, smokehood and baseplate enamelled Black, extra, price on application.

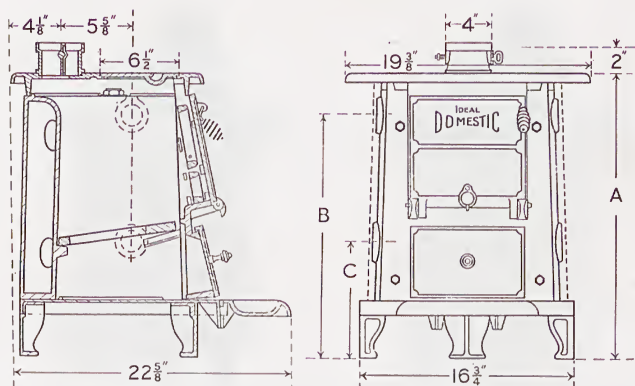
**When ordering specify Grey, Green or Blue Mottle, or Cream, otherwise ordinary Black finish (not enamelled) will be supplied.**

† Bower-barffed.

Baseplate .. Black finish, 8s. 6d. ; Mottle enamelled, 14s. 9d.  
 Side Jackets, per pair, Mottle enamelled .. .. 5s. 7d.  
 Stoking Tools .. .. 1s. 5d. Draw-off Cock, ½-in. 4s. 0d.  
 Shaking Grate, extra .. 3s. 2d. Draw-off Plug .. 1s. 10d.  
 Gas Poker (see page 107) 4s. 6d. Cleaning Chisel .. 6s. 3d.  
 Spring Safety Valve, ½-in. or ¾-in. .. .. 3s. 9d.  
 If Top dull nickel-plated with edges polished .. extra 10s. 9d.  
 Stoking Tools (p. 159) and Draw-off Cock (p. 177) supplied unless otherwise ordered.

# IDEAL OPEN FIRE DOMESTIC BOILERS

For Hot Water Supply



Smoke Outlet suitable for spigot end of 4-in. cast iron smokepipe.

## Dimensions in Inches

No.	*Height to Top Plate  A  Ins.	*Height to Centre of Flow  B  Ins.	*Height to Centre of Return  C  Ins.	Number and Size of	
				Tappings Flow and Return  Ins.	Clean-out Openings  Ins.
00	22½	19 ¾	9¾	2-1½	{ 2-2 2-2½

\* Including Baseplate (4¾ ins.).

Smokepipe and Elbows should not be less than size of smoke outlet. Where independent cast iron chimney is used, 6 ins. is minimum size.

4½-in. smoke outlet can be supplied if specially ordered.

4½-in. by 6-in. Adapter for making 6-in. flue connection (see page 161), 2s. 1d. ; Mottle or Black enamelled, 3s. 9d.

Where the Smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). Price, 4-in., 1s. 8d. ; Mottle or Black enamelled, 2s. 5d.

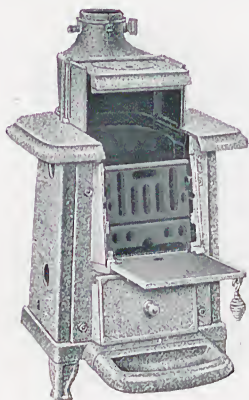
For particulars and prices of smokepipe, elbows, etc., in enamel finish, see pages 160 and 161.

## IDEAL OPEN FIRE DOMESTIC BOILERS

### For Hot Water Supply

Brit. Regd. Design No. 721584

Patent No. 263030



Vitreous Enamelled, with Side  
Jackets and Baseplate.



In Black finish, with Baseplate  
and Gas Poker.

No.	Capacity		Hot Water Supply only			Approx. Tank Size
	Water Gals.	Fuel Cu. ft.	B.T.U. per hour	Gals. per hour		
				40°-120°	40°-140°	Gals.
0	3½	0.49	20,000	25	20	25-30

No.	Heating Surface  Sq. ft.	Heating only		PRICES								
		B.T.U. per hour	Direct Radiation  Sq. ft.	Black, with Polished Top			*Vitreous Enamelled			†Extra if Boiler Rustless		
				£	s.	d.	£	s.	d.	£	s.	d.
0	2	8,800	60	4	12	3	5	16	6	1	7	6

\* Grey, Green or Blue Mottle, boiler body painted plain Grey.

Cream enamelled front platewayk, with top plate, smokehood and baseplate enamelled Black, extra, price on application.

When ordering, specify Grey, Green or Blue Mottle, or Cream, otherwise ordinary Black finish (not enamelled) will be supplied.

† Bower-barffed.

Baseplate .. Black finish, 8s. 6d.; Mottle enamelled, 14s. 9d.

Side Jackets, per pair, Mottle enamelled	..	..	..	5s.	7d.
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Stoking Tools .. ..	4s. 0d.	Draw-off Cock, $\frac{1}{2}$ -in.	4s. 0d.
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Shaking Grate, extra .. 3s. 2d. Draw-off Plug .. 1s. 10d.

Gas Poker (see page 107) 4s. 6d. Cleaning Chisel .. 6s. 3d.

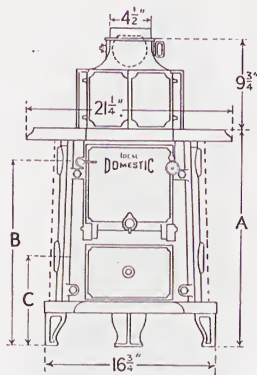
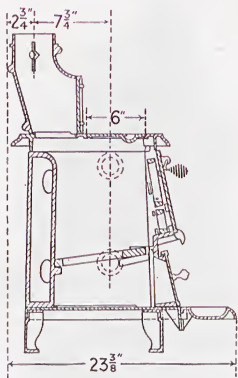
Spring Safety Valve, $\frac{1}{2}$ -in. or $\frac{3}{4}$ -in. . . . .	3s.	9d.
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If Top dull nickel-plated with edges polished .. extra **13s. 9d.**

Stoking Tools (p. 159) and **Draw-off Cock** (p. 177) supplied unless otherwise ordered.

# IDEAL OPEN FIRE DOMESTIC BOILERS

For Hot Water Supply



Smoke Outlet suitable for spigot end of 4½-in. cast iron smokepipe.

## Dimensions in Inches

No.	*Height to Top Plate  A	*Height to Centre of Flow  B	*Height to Centre of Return  C	Number and Size of	
	Ins.	Ins.	Ins.	Tappings Flow and Return  Ins.	Clean-out Openings  Ins.
0	22½	19 ⅜	9 ⅜	2-1½	{ 2-2 2-2½

\* Including Baseplate (4¾ ins.).

Smokepipe and Elbows should not be less than size of smoke outlet. Where independent cast iron chimney is used, 6 ins. is minimum size.

4½-in. by 6-in. Adapter for making 6-in. flue connection (see page 161), 2s. 1d. ; Mottle or Black enamelled, 3s. 9d.

Where the Smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). Price, 4½-in., 1s. 11d. ; Mottle or Black enamelled, 2s. 7d. ; 6-in., 2s. 1d. ; Mottle or Black enamelled, 3s. 3d.

For particulars and prices of smokepipe, elbows, etc., in enamel finish, see pages 160 and 161.

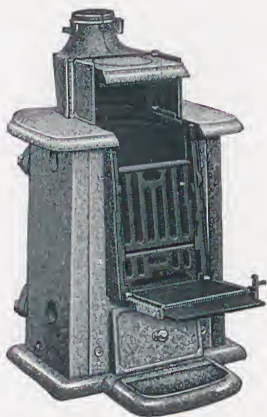


# IDEAL OPEN FIRE DOMESTIC BOILERS

For Hot Water Supply

Brit. Regd. Design No. 721584

Patent No. 263030



No. 01 in Black finish, with Baseplate and Gas Poker.

No. 02A Vitreous Enamelled, with Side Jackets and Baseplate.

No.	Capacities		Hot Water Supply only			Approx. Tank Size
	Water Gals.	Fuel Cu. ft.	B.T.U. per hour	Gals. per hour		
				40°-120°	40°-140°	Gals.
01	4	0.65	25,000	31	25	30-40
02A	5½	0.85	40,000	50	40	40-50

No.	Heating Surface Sq. ft.	Heating only		PRICES					
		B.T.U. per hour	Direct Radiation Sq. ft.	Black, with Polished Top			*Vitreous Enamelled		
				£	s.	d.	£	s.	d.
01	2½	11,250	80	5	5	9	6	13	3
02A	4	18,000	125	8	12	6	10	7	3

\* Grey, Green or Blue Mottle, boiler body painted plain Grey.

Cream enamelled front platerwork, with top plate, smokehood and baseplate enamelled Black, extra, price on application.

**When ordering, specify Grey, Green or Blue Mottled, or Cream, otherwise ordinary Black finish (not enamelled) will be supplied.**

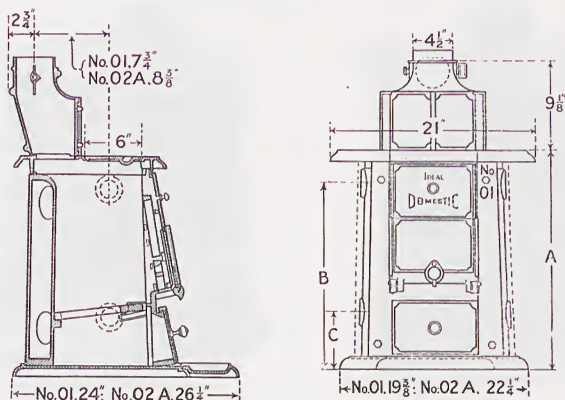
† Bower-barffed.

Baseplate . . . Black finish, 7s. 10d. ; Mottle enamelled, 12s. 10d.  
 Side Jackets, per pair, Mottle enamelled, No. 01, 6s. 11d. ; No. 02A, 8s. 5d.  
 Stoking Tools . . . per set 4s. 0d. Draw-off Cock, ½-in. 4s. 0d.  
 Shaking Grate No. 01, extra 3s. 2d. Draw-off Plug . . 1s. 10d.  
 Gas Poker (see page 107) 4s. 6d. Cleaning Chisel . . 6s. 3d.  
 Spring Safety Valve, ½-in. or ¾-in. . . . . 3s. 9d.  
 If Top dull nickel-plated with edges polished . . extra 13s. 9d.  
 Stoking Tools (p. 159) and Draw-off Cock (p. 177) supplied unless otherwise ordered.



# IDEAL OPEN FIRE DOMESTIC BOILERS

For Hot Water Supply



Smoke Outlet suitable for spigot end of 4½-in. cast iron smokepipe.

## Dimensions in Inches

No.	*Height to Top Plate	*Height to Centre of Flow	*Height to Centre of Return	Number and Size of	
	A	B	C	Tappings Flow and Return	Clean-out Openings
	Ins.	Ins.	Ins.	Ins.	Ins.
01	22 1/8	18 7/8	5 7/8	2-1 1/2	4-2 1/2
02A	23 1/8	19 3/4	5 13/16	2-1 1/2	4-3 1/2

\* Including Baseplate (No. 01, 1 1/8 ins. ; No. 02A, 1 1/16 ins.).

Smokepipe and Elbows should not be less than size of smoke outlet. Where independent cast iron chimney is used, 6 ins. is minimum size.

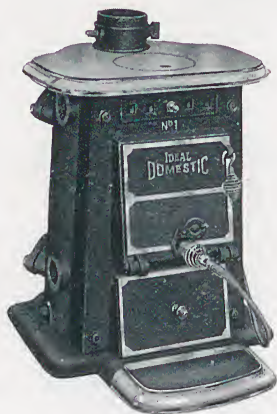
4½-in. by 6-in. Adapter for making 6-in. flue connection (see page 161), 2s. 1d. ; Mottle or Black enamelled, 3s. 9d.

Where the Smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). Price, 4½-in., 1s. 11d. ; Mottle or Black enamelled, 2s. 7d. ; 6-in., 2s. 1d. ; Mottle or Black enamelled, 3s. 3d.

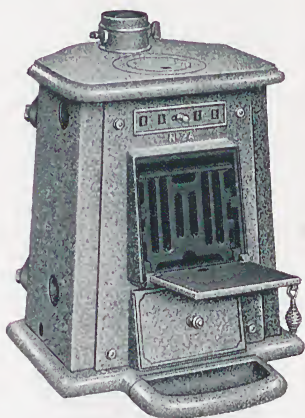
For particulars and prices of smokepipe, elbows, etc., in enamel finish, see pages 160 and 161.

# IDEAL OPEN FIRE DOMESTIC BOILERS

For Hot Water Supply



No. 1 in Black finish, with Baseplate and Gas Poker.



No. 2A Enamelled, with Side Jackets and Baseplate.

No.	Capacity		Hot Water Supply only			Approx. Tank Size
	Water	Fuel	B.T.U. per hour	Gals. per hour		
	Gals.	Cu. ft.		40°-120°	40°-140°	Gals.
1	4	0.65	25,000	31	25	30-40
2A	5½	0.85	40,000	50	40	40-50

No.	Heating Surface  Sq. ft.	Heating only		PRICES					
		B.T.U. per hour	Direct Radiation  Sq. ft.	Black, with Polished Top			*Vitreous Enamelled		
				£	s.	d.	£	s.	d.
1	2½	11,250	80	5	1	0	6	6	0
2A	4	18,000	125	8	4	0	9	15	0

\* Grey, Green or Blue Mottle, boiler body painted plain Grey.  
 Cream enamelled front platework, with top plate, smokehood and baseplate enamelled  
 Black, extra, price on application.

**When ordering, specify Grey, Green or Blue Mottle, or Cream, otherwise ordinary Black finish (not enamelled) will be supplied.**

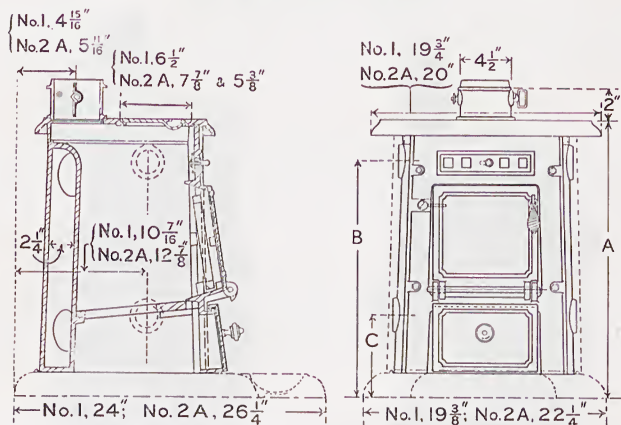
† Bower-barffed.

Baseplate . . Black finish, 7s. 10d. ; Mottle enamelled, 12s. 10d.  
 Side Jackets, per pair, Mottle enamelled, No. 1, 6s. 11d.; No. 2A 8s. 5d.  
 Stoking Tools . . per set 4s. 0d. Draw-off Cock, ½-in. 4s. 0d.  
 Shaking Grate, No. 1, extra 3s. 2d. Draw-off Plug . . 1s. 10d.  
 Gas Poker (see page 107) 4s. 6d. Cleaning Chisel . . 6s. 3d.  
 Spring Safety Valve, ½-in. or ¾-in. . . . . 3s. 9d.  
 If Top dull nickel-plated with edged polished . . extra 10s. 9d.

Stoking Tools (p. 159) and Draw-off Cock (p. 177) supplied unless otherwise ordered.

# IDEAL OPEN FIRE DOMESTIC BOILERS

For Hot Water Supply



Smoke Outlet suitable for pigot end of 4 $\frac{1}{2}$ -in. cast iron smokepipe.

## Dimensions in Inches

No.	*Height to Top Plate	*Height to Centre of Flow	*Height to Centre of Return	Number and Size of	
	A Ins.	B Ins.	C Ins.	Tappings Flow and Return Ins.	Clean-out Openings Ins.
1	22 $\frac{1}{8}$	18 $\frac{7}{8}$	5 $\frac{7}{8}$	2-1 $\frac{1}{2}$	4-2 $\frac{1}{2}$
2A	23 $\frac{1}{8}$	19 $\frac{3}{4}$	5 $\frac{13}{16}$	2-1 $\frac{1}{2}$	4-3 $\frac{1}{2}$

\* Including Baseplate (No. 1, 1  $\frac{1}{8}$  ins. ; No. 2A, 1  $\frac{1}{16}$  ins.).

Smokepipe and Elbows should not be less than size of smoke outlet. Where independent cast iron chimney is used, 6 ins. is minimum size.

4 $\frac{1}{2}$ -in. by 6-in. Adapter for making 6-in. flue connection (see page 161), 2s. 1d. ; Mottle or Black enamelled, 3s. 9d.

Where the Smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). Price, 4 $\frac{1}{2}$ -in., 1s. 11d. ; Mottle or Black enamelled, 2s. 7d. ; 6-in., 2s. 1d. ; Mottle or Black enamelled, 3s. 3d.

For particulars and prices of smokepipe, elbows, etc., in enamel finish, see pages 160 and 161.

# IDEAL DOMESTIC BOILERS

For Hot Water Supply



No. 4D, with Baseplate and Gas Poker.



No. 5D, with Baseplate and Damper Regulator.

No.	Capacity		Hot Water Supply only			Approx. Tank Size
	Water Gals.	Fuel Cu. ft.	B.T.U. per hour	Gallons per hour		
				40°-120°	40°-140°	Gals.
4D	6	0.65	38,500	47	38	40-50
5D	8	0.80	49,500	61	49	50-60
6D	12½	1.25	66,000	82	66	60-80

No.	Heating Surface  Sq. ft.	Heating only		Boiler only with polished top †			Extra if Firepot rustless*			Baseplate	
		B.T.U. per hour	Direct Radiation Sq. ft.	£	s.	d.	£	s.	d.	s.	d.
4D	3½	15,200	105	5	9	0	2	8	3	12	6
5D	4½	19,200	135	6	4	9	2	12	0	12	6
6D	6	26,800	185	7	16	3	3	3	6	14	6

\* Bower-barffed.

† Enamelled platework extra if required.

Stoking Tools.. per set 4s. 0d. Draw-off Cock, ½-in. 4s. 0d.  
 Cleaning Chisel .. 6s. 3d. Draw-off Plug .. 1s. 10d.  
 If Top dull nickel-plated with edges polished .. extra 13s. 9d.  
 Spring Safety Valve, ½-in. or ¾-in. . . . . 3s. 9d.  
 No. 802 Ideal Damper Regulator (see page 175).. £1 4s. 6d.

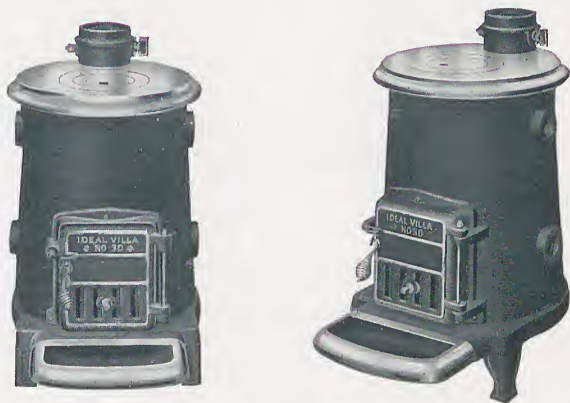
When automatic regulation is required, a lifting ashpit damper is provided as shown.

Gas Poker, for lighting fire without using wood, and 4-ft. length  
 of flexible metallic tubing with connections (see page 107) 4s. 6d.

Stoking Tools (p. 159) and Draw-off Cock (p. 177) supplied unless otherwise ordered.

## IDEAL DOMESTIC BOILERS

For Hot Water Supply

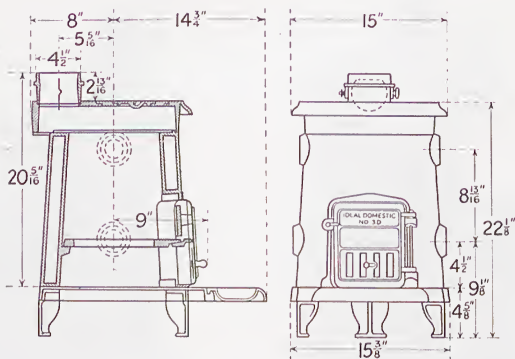


This Boiler has been specially designed to meet the demand for a small and inexpensive type for use in districts where the water contains little or no lime in solution, with consequent absence of deposit and necessity for cleaning.

The boiler body can be supplied rustless if desired. A polished top plate with loose ring and cover is provided, and will be found efficient for heating pans. The baseplate illustrated is not an essential part of the Boiler, but can be supplied at a small extra cost.

# IDEAL DOMESTIC BOILERS

## For Hot Water Supply



## Capacities, Ratings and Prices

No.	Capacity		Heating Surface	Hot Water Supply only			Approx. Tank Size
	Water	Fuel		B.T.U. per hour	Gallons per hour		
	Gals.	Cu. ft.			Sq. ft.	40°—120°	40°—140°
3D	1·13	0·55	2½	25,000	31	25	30—40

No.	Heating only		Tappings, Flow and Return	PRICES		
	B.T.U. per hour	Direct Radiation Sq. ft.		Boiler only	Extra if Firepot rustless*	Baseplate
3D	11,250	80	2—1¼"			

†Stoking Tools .. .. †Draw-off Cock ..

If top dull nickel-plated with edges polished, extra ..

Smokepipe and Elbows should not be less than size of smoke outlet. Where independent cast-iron or sheet-iron chimney is used, 6 ins. is minimum size.

4½-in. × 6-in. Adapter for making 6-in. flue connection, PRICE

Where the smokepipe is required to pass through blanking-off plate at base of chimney flue, a cast-iron collar can be supplied for making tight joint, PRICE

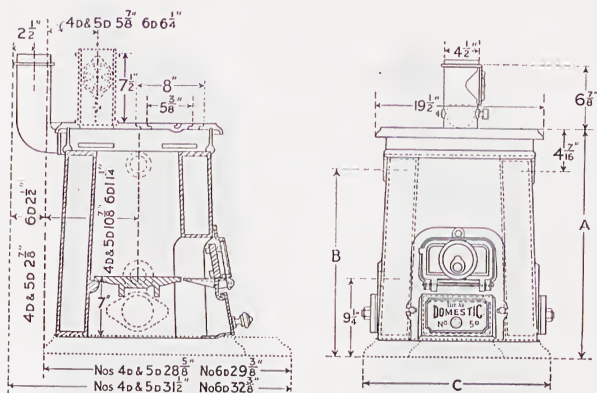
A set of Stoking Tools consists of Poker, Slice Bar and Shovel.

\* By Bower-barffing process. † Supplied unless otherwise ordered.



# IDEAL DOMESTIC BOILERS

For Hot Water Supply



Smoke Outlet suitable for spigot end of 4½-in. cast iron smokepipe.

## Dimensions in Inches

No.	*Height Floor to Top Plate  A  Ins.	*Height to Centre of Flow  B  Ins.	Dia. of Base- plate  C  Ins.	Number and Size of		
				Tappings Flow and Return  Ins.	†Clean-out Openings	
					Top Ins.	Bottom Ins.
4D	22 ¼	17 ¾	21 ¾	2-1 ½	4-2	2-3 ½
5D	26 ¼	21 ¾	21 ¾	2-1 ½	4-2	2-3 ½
6D	33 11/16	29 ¼	22 ¾	2-1 ½	4-2	2-3 ½

\* Including Baseplate (2¼ ins.).

† No. 6D has also 1-3½-in. clean-out at front.

These Boilers can also be supplied with top smoke outlet for 4½-in. smokepipe.

Smokepipe and Elbows should not be less than size of smoke outlet. Where independent cast iron chimney is used, 6 ins. is minimum size.

4½-in. by 6-in. Adapter, for making 6-in. flue connection (see page 161), 2s. 1d.

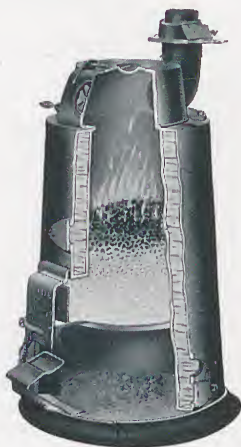
Where the smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). Prices, 4½-in. 1s. 11d. ; 6-in. 2s. 1d.

# IDEAL DOMESTIC BOILERS

For Hot Water Supply



No. 14D, with Baseplate and Damper Regulator.



No. 15D. Cut View, with Baseplate.

No.	Water Contents Gals.	Fuel Capacity Cu. ft.	Hot Water Supply only			
			B.T.U. per hour	Gallons per hour		
				40°-120°	40°-140°	40°-160°
14D	17	1.90	99,000	123	99	82
15D	21	2.95	132,000	165	132	110

No.	Heating Surface	Heating only		Boiler only			Extra if Firepot Rustless*			Baseplate		
		B.T.U. per hour	Direct Radiation									
	Sq. ft.	Sq. ft.	£	s.	d.	£	s.	d.	£	s.	d.	
14D	9	34,800	240	12	4	6	4	14	6	1	0	6
15D	12	53,500	370	16	12	6	5	12	9	1	9	0

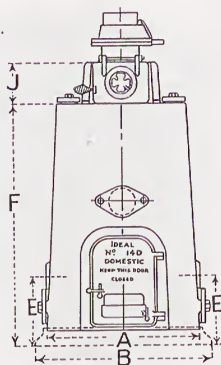
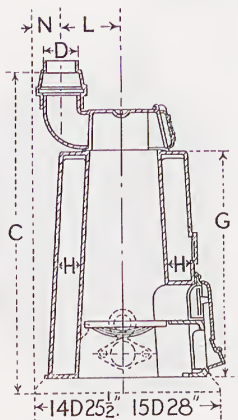
\* Bower-barfied.

Stoking Tools, per set .. .. . 14D, 10s. 0d.; 15D, 10s. 0d.  
 Draw-off Cock, ½-in. .. 4s. 0d. Cleaning Chisel .. 6s. 3d.  
 Draw-off Plug 1s. 10d. Spring Safety Valve, ½-in. or ¾-in. 3s. 9d.  
 No. 802 Ideal Damper Regulator (see page 175).. £1 4s. 6d.

Stoking Tools (p. 159) and Draw-off Cock (p. 177) supplied unless otherwise ordered

# IDEAL DOMESTIC BOILERS

For Hot Water Supply



Smoke Outlet suitable for socket end of cast iron smokepipe.

## Dimensions in Inches

No.	A	B	C*	D	E*	F*	G	H	J	L	N
14D	22 $\frac{3}{8}$	25 $\frac{1}{2}$	48	4 $\frac{1}{2}$ †	9 $\frac{1}{4}$	35 $\frac{1}{4}$	33	3	7 $\frac{9}{16}$	8 $\frac{1}{2}$	4 $\frac{1}{4}$
15D	24 $\frac{7}{8}$	28	51 $\frac{7}{16}$	6	9 $\frac{1}{2}$	38 $\frac{1}{2}$	36	3	7 $\frac{1}{4}$	10 $\frac{1}{2}$	3 $\frac{1}{2}$

\* Including Baseplate (No. 14D, 2 $\frac{1}{4}$  ins. ; No. 15D, 2 $\frac{1}{2}$  ins.).

Smokepipe and Elbows should not be less than size of smoke outlet. Where independent cast iron chimney is used, 6 ins. is minimum size.

† 4 $\frac{1}{2}$ -ins. × 6-in. Adapter for making 6-in. flue connection (see page 161) . . 2s. 1d

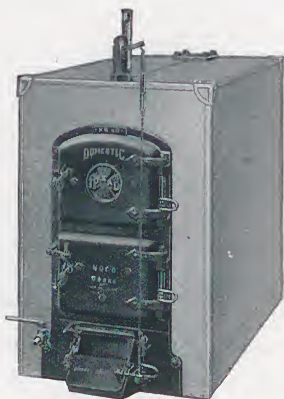
Where the smokepipe will pass through blanking-off plate at base of chimney flue a cast iron collar can be supplied for making tight joint (see page 161). Prices, 4 $\frac{1}{2}$ -in. 1s. 11d., 6-in. 2s. 1d.

## Tappings and Clean-out Openings

No.	Number and Size of				
	Tappings		Clean-out Openings		
	Flow	Return	Top	Bottom	Centre
14D	2—2"	2—2"	4—2 $\frac{1}{2}$ "	2—3 $\frac{1}{2}$ "	1—3 $\frac{1}{2}$ "
15D	2—2"	2—2"	4—2 $\frac{1}{2}$ "	2—3 $\frac{1}{2}$ "	1—3 $\frac{1}{2}$ "

# IDEAL SECTIONAL DOMESTIC BOILERS

For Hot Water Supply



With Insulating Jacket.



Without Jacket.

No	Heating Surface  Sq. ft.	B.T.U. per hour	Gallons per hour 40°-140°	PRICES							
				Boiler only	Extra if rustless (Bower-barffed)*			Insulating Galvanised Steel Jacket†			Stoking Tools
					£	s.	d.	£	s.	d.	s. d.
HW-20	6.25	68,750	68	8 15 6	3	7	3	1 8 0			4 0
HW-30	9.05	99,550	99	12 18 9	4	17	6	1 18 9			11 5
HW-40	11.85	130,350	130	17 2 0	6	7	9	2 9 6			11 5
HW-50	14.65	161,150	161	21 5 3	7	18	0	3 0 3			11 5
HW-60	17.45	191,950	191	25 8 6	9	8	3	3 11 0			13 0

\* Price includes Bower-barffed flow and return flanges to size required. Should additional plugs or bushings be needed, special brass fittings, with threads to cover the full depth of tapping, can be supplied at extra cost.

† Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for

enlarging Boilers . . . . . each £4 3s. 6d.  
Ditto, including jacket extension pieces . . . . . 4 14 0

No. 802 Ideal Damper Regulator (see page 175) 1 4 6  
Draw-off Cock, ¾-in., 4s. 11d. Cleaning Chisel 6 3

Grate Bars : Grill pattern.

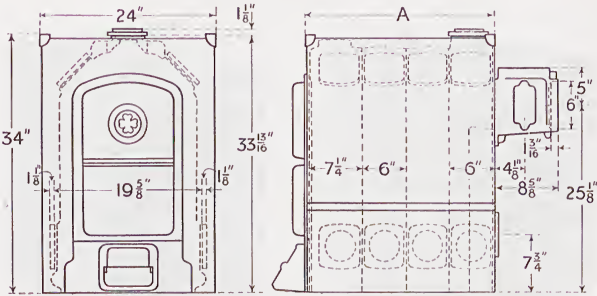
Stoking Tools : Supplied unless otherwise ordered (see page 159).

Draw-off Cock : " " " " ( " 177).

Jacket : When ordering Jacket, state position of tappings.

# IDEAL SECTIONAL DOMESTIC BOILERS

## For Hot Water Supply



Interchangeable Smokehood, with Socket Outlet at top or back for spigot end of 6-in. cast iron smokepipe.

No.	Num-ber of Sec-tions	Capacity		Length of Boiler A † Ins.	Flanged Con-nections  Flow and Return ‡ Ins.	No. and Size of Clean-out Openings  Top and Bottom each side  Ins.
		Water	Fuel			
		Gals.	*Cu. ft.			
HW-20	2	8·8	1·4	14 1/4	1-2 1/2	8-4
HW-30	3	11·2	2·2	20 1/4	1-2 1/2	12-4
HW-40	4	13·6	3·0	26 1/4	1-2 1/2	16-4
HW-50	5	16·0	3·8	32 1/4	1-2 1/2	20-4
HW-60	6	18·4	4·6	38 1/4	1-2 1/2	24-4

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

‡ Flow connection on top of back section. If specially ordered, can be provided on any intermediate section.

Return connection on face of back section ; if specially ordered, can be on either side of any intermediate section, height to centre 6 3/8 ins.

An additional flow on top, or return at either side of any intermediate section will be supplied to special order without extra charge.

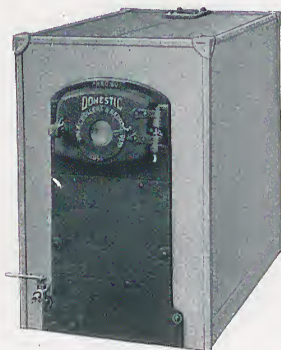
3-in. flow and return connections can be provided if specified on order.

In addition to the openings mentioned above, all boilers have one 1 1/2-in. and one 1/2-in. tapping on top of front section.

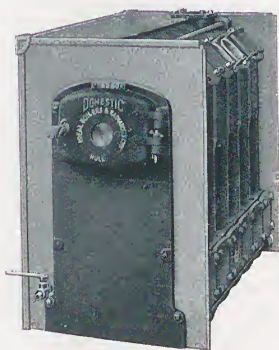


# IDEAL SECTIONAL DOMESTIC BOILERS

## FOR OIL FUEL



With Insulating Jacket.



With detachable Jacket pieces removed to expose clean-outs.

No.	Heating Surface Sq. ft.	B.T.U. per hour	Gallons per hour 40°-140°	PRICES								
				Boiler only			*Extra if rustless (Bower-barffed)			Insulating Galvanised Steel Jacket†		
				£	s.	d.	£	s.	d.	£	s.	d.
HWO-40	14.75	147,500	147	21	6	0	6	14	6	2	9	3
HWO-50	17.55	175,500	175	25	9	6	8	4	9	3	0	0
HWO-60	20.35	203,500	203	29	13	0	9	15	0	3	10	9
HWO-70	23.15	231,500	231	33	16	6	11	5	3	4	1	6
HWO-80	25.95	259,500	259	38	0	0	12	15	6	4	12	3

\* Price includes Bower-barffed flow and return flanges to size required. Should additional plugs or bushings be needed, special brass fittings, with threads to cover the full depth of tapping, can be supplied at extra cost.

† Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

**Draw-off Cock,  $\frac{3}{4}$ -in. . . 4s. 11d.    Cleaning Chisel . . 6s. 3d.**

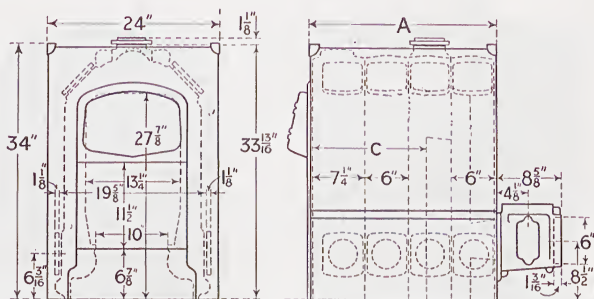
Draw-off Cock : Supplied unless otherwise ordered (see page 177).

Jacket :                      When ordering Jacket, state position of tappings.



# IDEAL SECTIONAL DOMESTIC BOILERS

## FOR OIL FUEL



Interchangeable Smokehood, with Socket Outlet at top or back for spigot end of 6-in. cast iron smokepipe.

No.	Number of Sections	Water Capacity	Length of Boiler	Length of Firebox	Flanged Connections	† No. and Size of Clean-out Openings
		Gals.	A Ins.	C Ins.	Flow and Return Ins.	Top and Bottom each side Ins.
HWO-40	4	16.4	26 $\frac{1}{4}$	16	1-2 $\frac{1}{2}$	16-4
HWO-50	5	18.8	32 $\frac{1}{4}$	22	1-2 $\frac{1}{2}$	20-4
HWO-60	6	21.2	38 $\frac{1}{4}$	28	1-2 $\frac{1}{2}$	24-4
HWO-70	7	23.6	44 $\frac{1}{4}$	34	1-2 $\frac{1}{2}$	28-4
HWO-80	8	26.0	50 $\frac{1}{4}$	40	1-2 $\frac{1}{2}$	32-4

† A special opening is also provided on each side of boiler between the two last sections, to give access for cleaning the flue.

Return connection on either side of any intermediate section.

An additional flow on top, or return at either side, will be provided to special order without extra charge.

3-in. flow and return connections can be provided if specified on order.

In addition to the openings mentioned above, all boilers have one 1 $\frac{1}{2}$ -in. and one  $\frac{1}{2}$ -in. tapping on top of front section.

# IDEAL SECTIONAL DOMESTIC BOILERS

For Hot Water Supply



With Insulating Jacket.



Without Jacket.

No.	Heating Surface	B.T.U. per hour	Gallons per hour 40°-140°	PRICES							
				Boiler only		*Extra if rustless (Bower-barffed)		Insulating Galvanised Steel Jacket†		Stoking Tools	
				£	s. d.	£	s. d.	£	s. d.	s. d.	
HW-3	14·00	154,000	154	24	14 3	7	14 9	3	11 0	14	0
HW-4	18·25	200,750	200	32	2 9	9	12 0	4	2 3	14	0
HW-5	22·50	247,500	247	39	11 3	11	9 3	4	13 6	17	9
HW-6	26·75	294,250	294	46	19 9	13	6 6	5	4 9	17	9
HW-7	31·00	341,000	341	54	8 3	15	3 9	5	16 0	19	9
HW-8	35·25	387,750	387	61	16 9	17	1 0	6	7 3	19	9

\* Price includes Bower-barffed flow and return flanges to size required. Should additional plugs or bushings be needed, special brass fittings, with threads to cover the full depth of tapping, can be supplied at extra cost.

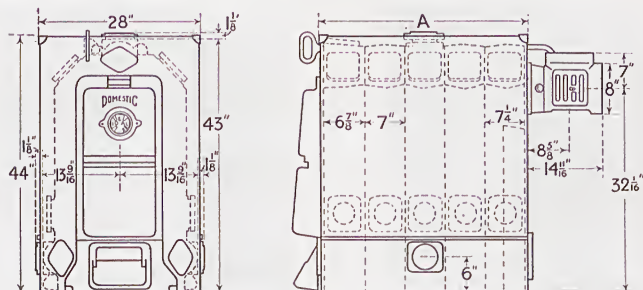
† Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for  
enlarging Boilers .. .. each £7 8s. 6d.  
Ditto, including jacket extension pieces .. , 8 6 0  
No. 802 Ideal Damper Regulator (see page 175) 1 4 6  
Draw-off Cock, 3/4-in., 4s. 11d. Cleaning Chisel 6 3

Grate Bars : Grill pattern.  
Stoking Tools : Supplied unless otherwise ordered (see page 159).  
Draw-off Cock : " " " " ( " 177).  
Jacket : When ordering Jacket, state position of tappings.

# IDEAL SECTIONAL DOMESTIC BOILERS

For Hot Water Supply



Universal Smokehood with Socket Outlet at back, top or side for spigot end of 8-in. cast iron smokepipe; fitted with checkdraught damper and cleaning door.

No.	Number of Sections	Capacity		Length of Boiler A †	Flanged Connections Flow and Return	No. and Size of Clean-out Openings		
		Water	Fuel			Top and Bottom each side	Front	Back
		Gals.	*Cu. ft.			Ins.	Ins.	Ins.
HW-3	3	21.0	3.3	22 1/8	1-3	12-4	3-3 3/8	2-3 3/4
HW-4	4	25.5	4.6	29 1/8	1-3	16-4	3-3 3/8	2-3 3/4
HW-5	5	30.0	6.0	36 1/8	1-3	20-4	3-3 3/8	2-3 3/4
HW-6	6	34.5	7.3	43 1/8	2-3	24-4	3-3 3/8	2-3 3/4
HW-7	7	39.0	8.6	50 1/8	2-3	28-4	3-3 3/8	2-3 3/4
HW-8	8	43.5	10.0	57 1/8	2-3	32-4	3-3 3/8	2-3 3/4

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

In addition to the openings mentioned above, all boilers have one 1 1/2-in. and one 1/2-in. tapping on top of front section.

# IDEAL SECTIONAL DOMESTIC BOILERS

## FOR OIL FUEL



With Insulating Jacket.



With detachable Jacket pieces removed to expose clean-outs.

No.	Heating Surface	B.T.U. per hour	Gallons per hour 40°-140°	PRICES								
				Boiler only			†Extra if rustless (Bower-barfed)			Insulating Galvanised Steel Jacket§		
				£	s.	d.	£	s.	d.	£	s.	d.
HWO-3	*14·00	140,000	140	24	14	6	7	14	9	3	11	0
HWO-4	24·00	240,000	240	33	12	0	9	15	9	4	2	3
HWO-5	28·25	282,500	282	42	9	6	11	16	9	4	13	6
HWO-6	32·50	325,000	325	51	7	0	13	17	9	5	4	9
HWO-7	36·75	367,500	367	60	4	6	15	18	9	5	16	0
HWO-8	41·00	410,000	410	69	2	0	17	19	9	6	7	3
HWO-9	45·25	452,500	452	77	19	6	20	0	9	6	18	6
H O-10	49·50	495,000	495	86	17	0	22	1	9	7	9	9

\* The three-section boiler has no flue travel, the back section and smokehood corresponding to that of the same size coke-fired boiler, see page 99.

† Price includes Bower-barfed flow and return flanges to size required. Should additional plugs or bushings be needed, special brass fittings, with threads to cover the full depth of tapping, can be supplied at extra cost.

§ Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

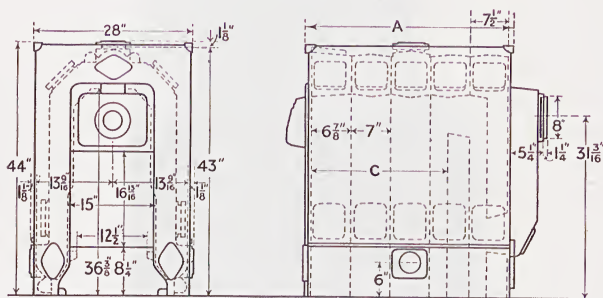
**Draw-off Cock,  $\frac{3}{4}$ -in. . . 4s. 11d. Cleaning Chisel . . 6s. 3d.**

Draw-off Cock : Supplied unless otherwise ordered (see page 177).

Jacket : When ordering Jacket, state position of tappings.

# IDEAL SECTIONAL DOMESTIC BOILERS

## FOR OIL FUEL



Smoke Outlet suitable for spigot end of 8-in. cast iron smokepipe.

No.	Number of Sections	Water Capacity	Length of Boiler	Length of Firebox	Flanged Connections Flow and Return	*No. and size of Clean-out Openings		
						Top and Bottom each side	Front	Back
		Gals.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
HWO-3	3	21.0	22 $\frac{1}{8}$	10	1-3	12-4	3-3 $\frac{3}{8}$	2-3 $\frac{3}{4}$
HWO-4	4	31.5	29 $\frac{3}{8}$	17	1-3	16-4	3-3 $\frac{3}{8}$	2-3 $\frac{3}{4}$
HWO-5	5	36.0	36 $\frac{3}{8}$	24	1-3	20-4	3-3 $\frac{3}{8}$	2-3 $\frac{3}{4}$
HWO-6	6	40.5	43 $\frac{3}{8}$	31	2-3	24-4	3-3 $\frac{3}{8}$	2-3 $\frac{3}{4}$
HWO-7	7	45.0	50 $\frac{3}{8}$	38	2-3	28-4	3-3 $\frac{3}{8}$	2-3 $\frac{3}{4}$
HWO-8	8	49.5	57 $\frac{3}{8}$	45	2-3	32-4	3-3 $\frac{3}{8}$	2-3 $\frac{3}{4}$
HWO-9	9	54.0	64 $\frac{3}{8}$	52	3-3	36-4	3-3 $\frac{3}{8}$	2-3 $\frac{3}{4}$
HWO-10	10	58.5	71 $\frac{3}{8}$	59	3-3	40-4	3-3 $\frac{3}{8}$	2-3 $\frac{3}{4}$

\* A special opening is also provided on each side of boiler between the two last sections, to give access for cleaning the flue, except in the case of the three-section boiler, which has no flue travel.

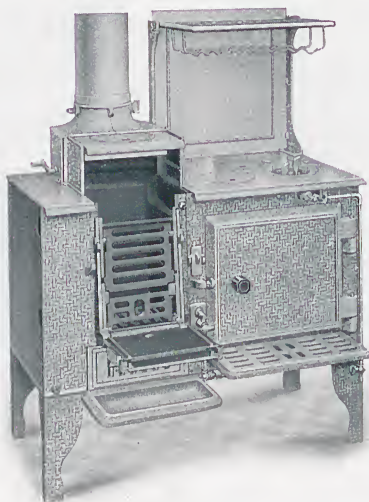
In addition to the openings mentioned above, all boilers have one  $1\frac{1}{2}$ -in. and one  $\frac{1}{2}$ -in. tapping on top of front section.



# IDEAL COOKANHEAT No. 30

Regd. Design No. 772065

For Cooking and Direct Hot Water Supply



No. 30.—Open. With Gas Cooking Attachment, Plate-rack, Splashback and short length of Smokepipe.

Vitreous enamelled. Standard finish, Grey Mottle; other finishes—Green and Blue Mottle.

Quickly convertible from closed position to give fully open fire. The boiler can readily be removed for cleaning.

No.	Water Con- tents	Fuel Capa- city	Capacity			Heating only  B.T.U. per hour	PRICES				
			For Hot Water Supply only. B.T.U. per hour	Gals. per hour			*Vitreous Enamelled	Extra if Boiler Rustless (Bower- barffed)			
				40- 120°	40- 140°			s. d.			
	Gals.	Cu. ft.					£	s.	d.	s.	d.
30	2·8	0·7	20,000	25	20	8,800	11	11	0	21	6

\* Unless otherwise ordered, standard Grey Mottle finish will be supplied.

If specified on order, oven can be on left-hand side.

Gas Cooking Attachment	..	..	..	£2	8s.	0d.
Plate-rack and Splashback (see page 107)	..	..	..	1	4	0
Draw-off Cock, $\frac{1}{2}$ -in., 4s. 0d.; Summer Grate	..	..	..	4	0	

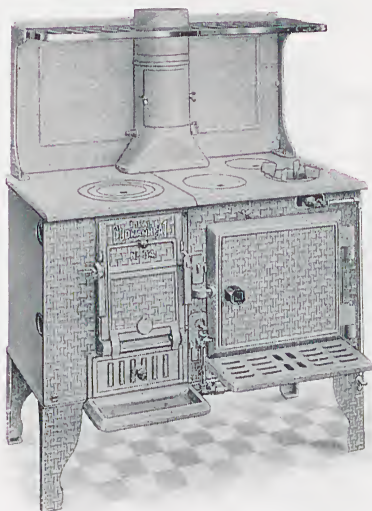
Where the smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). PRICE 2s. 1d.; Mottle enamelled, 3s. 3d.

Dimensions, page 106. Enamelled Smokepipe, page 161. Safety Valve, page 171. Hot Water Storage Cylinders, pages 108 and 109.



# IDEAL COOKANHEAT No. 34

For Cooking and Direct Hot Water Supply



No. 34. With Gas Cooking Attachment, Plate-rack, Splashback and short length of Smokepipe.

Vitreous enamelled. Standard finish, Grey Mottle; other finishes—Green and Blue Mottle.

An open fire effect is obtained by lowering the door at front. The boiler can readily be removed for cleaning.

No.	Water Con- tents	Fuel Capa- city	Capacity			Heating only  B.T.U. per hour	PRICES				
			For Hot Water Supply only. B.T.U. per hour	Gals. per hour			*Vitreous Enamelled	Extra if Boiler Rustless (Bower- barfed)			
				40- 120°	40- 140°						
	Gals.	Cu. ft.					£	s.	d.	s.	d.
34	2·8	0·7	20,000	25	20	8,800	11	11	0	21	6

\* Unless otherwise ordered, standard Grey Mottle finish will be supplied.

If specified on order, oven can be on left-hand side.

Gas Cooking Attachment .. .. £2 8s. 0d.  
 Plate-rack and Splashback (see page 107) .. .. 1 12 0  
 Draw-off Cock,  $\frac{1}{2}$ -in., 4s. 0d.; Summer Grate .. .. 4 0

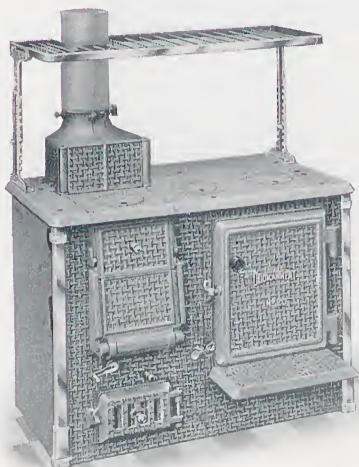
Where the smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). Price 2s. 1d.; Mottled enamelled, 3s. 3d.

Dimensions, page 106. Enamelled Smokepipe, page 161. Safety Valve, page 171. Hot Water Storage Cylinders, pages 108 and 109.

# IDEAL COOKANHEAT No. 20

Brit. Regd. Design No. 743203

For Cooking and Direct Hot Water Supply



No. 20—Closed. Grey Mottle Enamel finish, with Plate-rack and short length of Smokepipe.

Standard finish, painted Black with edges polished and plated. Vitreous enamel finishes—Grey, Green and Blue Mottle. State colour required.

Sides and back fitted with insulating jacket. Lifting grate provided. Quickly convertible from closed position to give large open fire. The boiler can readily be removed for cleaning.

No.	Water Con- tents	Fuel Capa- city	Capacity			Heating only  B.T.U. per hour	PRICES		
			For Hot Water Supply only  B.T.U. per hour	Gals. per hour			Black, with Edges Polished & Plated  £ s. d.	Vitreous Enamelled  £ s. d.	Extra if Boiler Rustless (Bower- barffed)  s. d.
				40- 120°	40- 140°				
20	Gals. 2·8	Cu. ft. 0·5	20,000	25	20	8,800	15 2 0	17 5 6	19 9

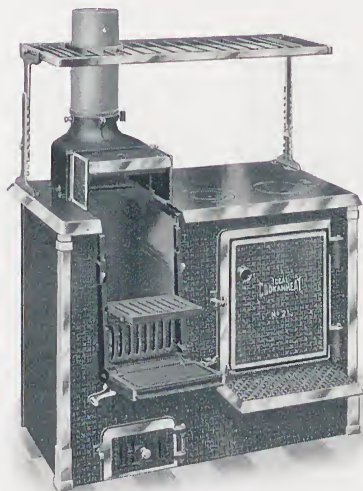
If specified on order, oven door can be hinged on left-hand side.

Where the smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). PRICE 2s. 1d.; Mottle enamelled, 3s. 3d.

For Dimensions, see page 106. Enamelled Smokepipe, page 161. Draw-off Cock, page 177. Safety Valve, page 171. Hot Water Storage Cylinders, pages 108 and 109. Plate-rack, page 107.

**IDEAL COOKANHEAT No. 21**

Brit. Regd. Design No. 743203

**For Cooking, Heating and Indirect Hot Water Supply**

No. 21—Open. Standard Finish, with Plate-rack  
and short length of Smokepipe.

Standard finish, painted Black with edges polished and plated.  
Vitreous enamel finishes—Grey, Green and Blue Mottle.  
State colour required.

Sides and back fitted with insulating jacket. Lifting grate provided. Quickly convertible from closed position to give large open fire.

**Rating**

The No. 21 Ideal Cookanheat is designed to take care of direct radiation up to 100 sq. ft. (including piping) in addition to giving an ample supply of hot water for domestic purposes.

As the boiler is of the heating type and cannot be cleaned out, it is essential that the hot water supply should be obtained by the "Indirect" method, with the Ideal Indirect Cylinders (see page 108).

Rating 17,500 B.T.U. per hour. Fuel capacity 1.2 cu. ft.

Water capacity, 3.8 gals.

**Price, No. 21 Ideal Cookanheat, Standard finish . . £16 1s. 6d.**  
Do., do., Vitreous Enamelled . . 18 5 0

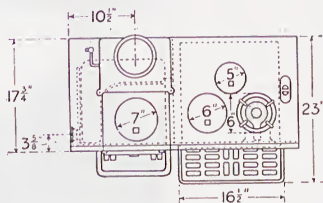
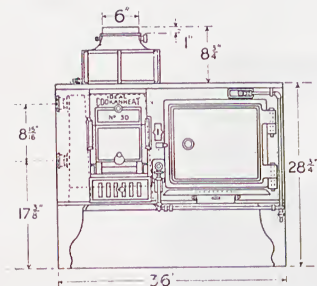
If specified on order, oven door can be hinged on left-hand side.

Where the smokepipe will pass through blanking-off plate at base of chimney flue, a cast iron collar can be supplied for making tight joint (see page 161). PRICE 2s. 1d.; Mottle enamelled, 3s. 3d.

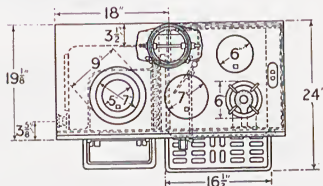
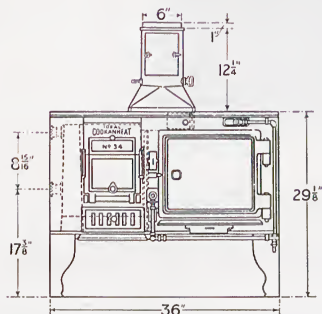
*For Dimensions, see page 107. Enamelled Smokepipe, page 161.  
Draw-off Cock, page 177. Safety Valve, page 171. Indirect Cylinders,  
pages 108 and 109. Plate-rack, page 107.*

# IDEAL COOKANHEAT

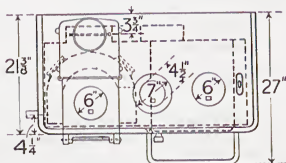
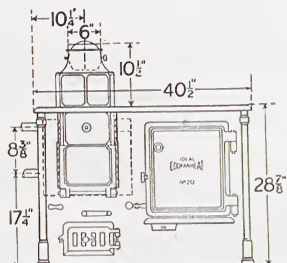
## Dimensions



**No. 30.** Oven : width, 15 ins. ; height, 13 ins. ; depth, 15 ins.  
Boiler Flow Outlet,  $1\frac{1}{4}$  ins. ; Return,  $1\frac{1}{4}$  ins.



**No. 34.** Oven : width, 15 ins. ; height, 13 ins. ; depth, 15 ins.  
Boiler Flow Outlet,  $1\frac{1}{4}$  ins. ; Return,  $1\frac{1}{4}$  ins.

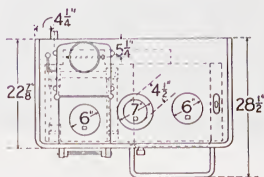
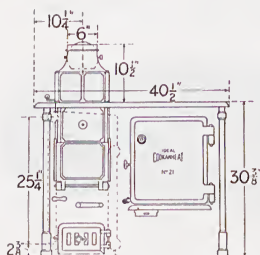


**No. 20.** Oven : width, 15 ins. ; height, 17 ins. ; depth, 14 ins.  
Boiler Flow Outlet,  $1\frac{1}{4}$  ins. ; Return,  $1\frac{1}{4}$  ins.

Smoke Outlets suitable for spigot end of 6-in. cast iron smokepipe.

# IDEAL COOKANHEAT

## Dimensions



**No. 21.** Oven : width, 15 ins. ; height, 17 ins. ; depth, 14 ins.  
Boiler Flow Outlet, 1 1/2 ins. ; Return, 1 1/2 ins.

Smoke Outlet suitable for spigot end of 6-in. cast iron smokepipe.

## Plate-rack and Splashback for Nos. 30 and 34

Plate-rack dull nickel-plated, with front edge polished and plated ; Splashback, 18 ins. high, with supports, all in vitreous enamel finish. PRICE, No. 30, 24s. 0d. No. 34, 32s. 0d.

## Adjustable Plate-rack for Nos. 20 and 21

Height, adjustable from 14 1/2 ins. to 24 1/2 ins. Projection, 16 ins.  
Length 38 1/2 ins. PRICE .. .. . £1 7s. 6d.  
If dull nickel-plated, with front edge polished and plated 1 16 3  
Extra if supports in enamel finish .. .. . 5 4

## CLINKER TONGS

For Ideal Cookanheat  
and small Boilers

Length 27 ins., PRICE 1s. 7d.



## Gas Poker

For Ideal Cookanheat Nos. 30 and 34, and Ideal  
Domestic Boilers



PRICE, complete with 4-ft. length of flexible metallic tubing  
and connections .. .. . 4s. 6d.



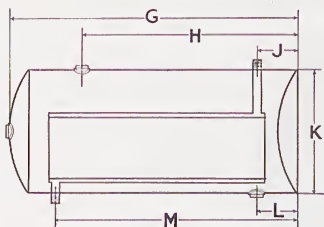
### Horizontal or Vertical



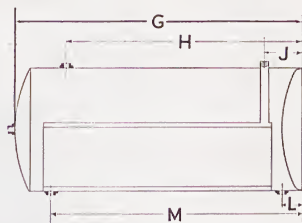
## IDEAL INDIRECT CYLINDERS

Horizontal or Vertical

For Ideal Cookanheat and other small installations



Nos. 0C, 1C and 2C (Copper)



Nos. 10, 11 and 12 (Galv.)

Size of tapings and heater connections.

Nos. 10, 0C, 11 and 1C, 1 in. ; Nos. 12 and 2C, 1½ ins.

### Dimensions in Inches

No.	G	H	J	K	L†	M
10 and 0C	30	22	5½	18	5½	25
11 „ 1C	34¾	27	5½	18	5½	29½
12 „ 2C	42¾	32	6	18	6	36

† Nos. 0C, 1C and 2C only ; Nos. 10, 11 and 12, 3 ins.



Nos. 10, 11 and 12

## IDEAL DIRECT CYLINDER No. 40



Vertical or Horizontal

For use with Ideal Cookanheat  
Nos. 20, 30 & 34 and small  
Domestic Boilers.

Capacity, 30 gallons.

Prices include five 1-in. tapings.

Galvanised Steel, 16G £2 0s. 5d.

Copper, 20G body and top ; 18G bottom ; test pressure 30 lb., working pressure 15 lb.	3 18 6
„ 18G body and top ; 16G bottom ; test pressure 50 lb., working pressure 25 lb.	5 0 0

# IDEAL No. 1 SERIES GAS BOILERS

For Heating and Indirect Hot Water Supply

Brit. Regd. Design No. 761736



No. 1-GB-4

In Grey Mottle Vitreous Enamel finish.

No.	Number of Sections	Water Capacity	Direct Radiation	B.T.U. per hour	Gallons per hour raised through 100°	*Gas Consumption, Cu. ft. per hour	PRICE		
		Gals.	Sq. ft.				£	s.	d.
1-GB-2	2	4.9	175	24,750	25.0	66	15	6	0
1-GB-3	3	6.3	345	49,500	49.5	132	19	18	3
1-GB-4	4	7.7	515	74,250	74.0	198	24	10	6
1-GB-5	5	9.1	685	99,000	99.0	264	29	2	9
1-GB-6	6	10.5	855	123,750	124.0	330	33	15	0
1-GB-7	7	11.9	1025	148,500	148.5	396	38	7	3

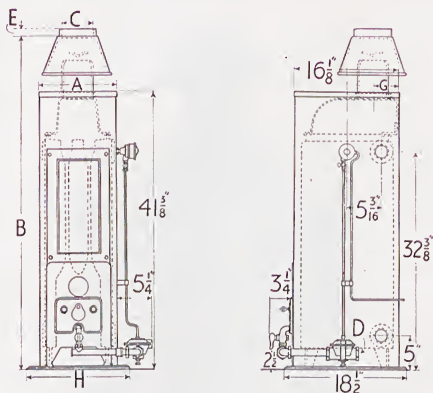
\* Calculated at 470 B.T.U. gross value per cubic foot. Consumption at other values can be computed on the basis of a boiler efficiency equal to 80% of the gross calorific value of the gas.

Where the value is higher or lower than 450/500, the calorific value, specific gravity and the supply pressure must be stated when ordering.

For particulars and prices of Clock Control and Room Thermostat, see pages 174 and 175.

# IDEAL No. 1 SERIES GAS BOILERS

For Heating and Indirect Hot Water Supply



No.	Dimensions in inches							Tappings	
	A	B	C*	D†	E	G	H	Flow Ins.	Return Ins.
1-GB-2	9 $\frac{1}{8}$	46 $\frac{5}{8}$	3	$\frac{1}{2}$	1 $\frac{1}{8}$	4 $\frac{9}{16}$	12	1-2	1-2
1-GB-3	12 $\frac{5}{8}$	49 $\frac{5}{8}$	4 $\frac{1}{2}$	$\frac{3}{4}$	1 $\frac{1}{8}$	4	15 $\frac{1}{2}$	1-2	1-2
1-GB-4	16 $\frac{1}{8}$	49 $\frac{5}{8}$	4 $\frac{1}{2}$	$\frac{3}{4}$	1 $\frac{1}{8}$	4	19	2-2	2-2
1-GB-5	19 $\frac{5}{8}$	49 $\frac{5}{8}$	6	1	1 $\frac{1}{8}$	4 $\frac{3}{4}$	22 $\frac{1}{2}$	2-2	2-2
1-GB-6	23 $\frac{1}{8}$	49 $\frac{5}{8}$	6	1	1 $\frac{1}{8}$	4 $\frac{3}{4}$	26	2-2	2-2
1-GB-7	26 $\frac{5}{8}$	49 $\frac{5}{8}$	6	1	1 $\frac{1}{8}$	4 $\frac{3}{4}$	29 $\frac{1}{2}$	2-2	2-2

\* Socket Outlet.

† The size of Control Valve and Governor also indicates the size of gas supply, except where the distance between meter and boiler exceeds about 20 ft., when it is necessary to use supply pipe of the next larger diameter.

## Standard Finish and Fittings

Vitreous enamelled in Grey Mottle.

Insulated Jacket.

Gas Control Valve and Thermostat complete with dull nickel-plated copper tube connections.

Gas Governor.

Chromium-plated Gas Cocks with pipe connection to Control Valve.  $\frac{1}{2}$ -in. Draw-off Cock.

# IDEAL No. 2 SERIES GAS BOILERS

For Heating and Indirect Hot Water Supply



No. 2-GB-7

In Grey Mottle Vitreous Enamel finish.

No.	Number of Sections	Water Capacity	Direct Radiation	B.T.U. per hour	Gallons per hour raised through 100°	*Gas Consumption. Cu. ft. per hour	PRICE		
		Gals.	Sq. ft.				£	s.	d.
2-GB-5	10	19.2	1,375	198,000	198.0	528	51	19	6
2-GB-6	12	22.0	1,720	247,500	247.5	660	61	4	0
2-GB-7	14	24.8	2,065	297,000	297.0	792	70	8	6

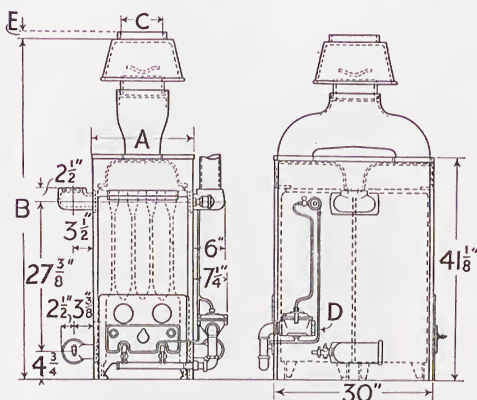
\* Calculated at 470 B.T.U. gross value per cubic foot. Consumption at other values can be computed on the basis of a boiler efficiency equal to 80% of the gross calorific value of the gas.

Where the value is higher or lower than 450/500, the calorific value, specific gravity and the supply pressure must be stated when ordering.

For particulars and prices of Clock Control and Room Thermostat, see pages 174 and 175.

# IDEAL No. 2 SERIES GAS BOILERS

For Heating and Indirect Hot Water Supply



No.	Dimensions in inches					Tappings	
	A	B	C*	D†	E	Flow Ins.	Return Ins.
2-GB-5	19 $\frac{5}{8}$	61 $\frac{3}{4}$	8	1 $\frac{1}{2}$	1 $\frac{1}{8}$	2-3	2-3
2-GB-6	23 $\frac{1}{8}$	61 $\frac{3}{4}$	8	1 $\frac{1}{2}$	1 $\frac{1}{8}$	2-3	2-3
2-GB-7	26 $\frac{5}{8}$	61 $\frac{3}{4}$	8	1 $\frac{1}{2}$	1 $\frac{1}{8}$	2-3	2-3

\* Socket Outlet.

† The size of Control Valve and Governor also indicates the size of gas supply, except where the distance between meter and boiler exceeds about 20 ft., when it is necessary to use supply pipe of the next larger diameter.

Flue cleanout panels are provided at front and back.

## Standard Finish and Fittings

Vitreous enamelled in Grey Mottle.

Insulated Jacket.

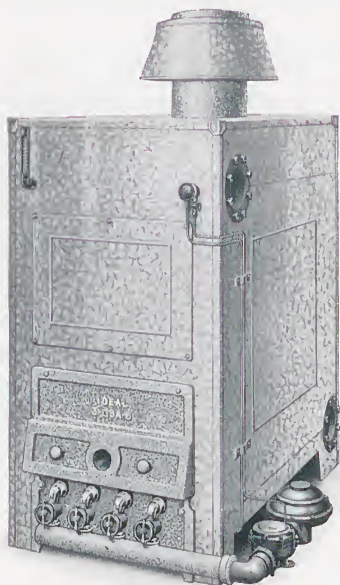
Gas Control Valve and Thermostat complete with dull nickel-plated copper tube connections.

Gas Governor.

Chromium-plated Gas Cocks with pipe connection to Control Valve. Two  $\frac{1}{2}$ -in. Draw-off Cocks.

# IDEAL No. 3 SERIES GAS BOILERS

For Water and Steam Heating and Indirect Hot Water Supply



No. 3-GBA-6

## Standard Finish and Fittings

Insulated Galvanised Steel Jacket. Can be fitted after pipe connections are made.

Front platework (frame, door and burner manifold) Vitreous enamelled in Grey Mottle.

Gas Control Valves and Thermostats complete with dull nickel-plated copper tube connections.

Gas Governors. Self-lubricating rough body Gas Cocks.

Two 1-in. Draw-off Cocks.

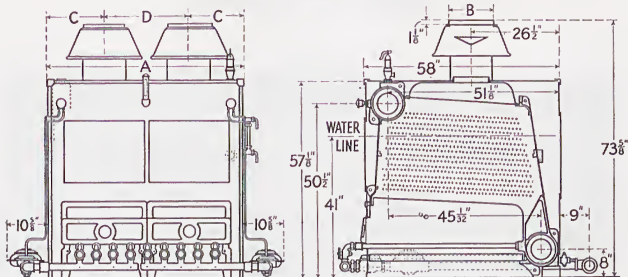
These boilers are provided with 2-in. Control Valves and Governors. Boilers of eight sections and over have two sets of controls and require a 3-in. supply, the necessary pipe and fittings for making left- or right-hand connection being included. The size of gas supply main should be as follows, unless the distance between meter and boiler exceeds that stated, when larger pipe should be used.

3-GBA-5	2-in.	40 ft.	3-GBA-8	3-in.	90 ft.	3-GBA-11	3-in.	50 ft.
3-GBA-6	2-in.	30 ft.	3-GBA-9	3-in.	70 ft.	3-GBA-12	3-in.	40 ft.
3-GBA-7	2-in.	20 ft.	3-GBA-10	3-in.	60 ft.	3-GBA-13	3-in.	30 ft.



# IDEAL No. 3 SERIES GAS BOILERS

For Water and Steam Heating and Indirect Hot Water Supply



An insulated foundation should be used; dimensioned drawing on application.

Water	Steam	Direct Radiation in Sq. ft.		B.T.U. per hour	Gallons per hour raised through 100°	*Gas Consumption, Cu. ft. per hour
No.	No.	Water Boiler	Steam Boiler			
3-GBA-5	3-GBA-50	2,700	1,510	390,000	390	1,040
3-GBA-6	3-GBA-60	3,605	2,020	520,000	520	1,385
3-GBA-7	3-GBA-70	4,510	2,530	650,000	650	1,735
3-GBA-8	3-GBA-80	5,415	3,040	780,000	780	2,080
3-GBA-9	3-GBA-90	6,320	3,550	910,000	910	2,425
3-GBA-10	3-GBA-100	7,225	4,060	1,040,000	1,040	2,775
3-GBA-11	3-GBA-110	8,130	4,570	1,170,000	1,170	3,120
3-GBA-12	3-GBA-120	9,035	5,080	1,300,000	1,300	3,465
3-GBA-13	3-GBA-130	9,940	5,590	1,430,000	1,430	3,810

Number of Sections	Water Capacity, Gallons.		Dimensions in inches				Connections, Flow and Return	PRICE		
	Water Boiler	Steam Boiler	A	Socket Outlets B	C	D		£	s.	d.
5	86	62	29 1/4	1-10"	14 5/8	—	1-5"	134	0	0
6	102	73	34 1/2	1-12"	17 1/4	—	1-5"	162	0	0
7	118	84	39 3/4	1-14"	19 7/8	—	1-5"	190	0	0
8	134	95	45	1-14"	22 1/2	—	1-5"	218	0	0
9	150	106	50 1/4	2-10"	14 5/8	21	2-5"	246	0	0
10	166	117	55 1/2	{ 1-10" 1-12" }	17 1/4	23 5/8	2-5"	274	0	0
11	182	128	60 3/4	2-12"	17 1/4	26 1/4	2-5"	302	0	0
12	198	139	66	{ 1-12" 1-14" }	19 7/8	28 7/8	2-5"	330	0	0
13	214	150	71 1/4	2-14"	19 7/8	31 1/2	2-5"	358	0	0

\* Calculated at 470 B.T.U. gross value per cubic foot. Consumption at other values can be computed on the basis of a boiler efficiency equal to 80 per cent. of the gross calorific value of the gas. Where the value is higher or lower than 450/500, the calorific value, specific gravity and supply pressure must be stated on order.

Flue cleanout panels are provided at front and back.

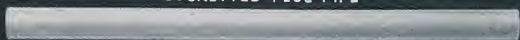
Steam Mountings, see page 176, supplied unless otherwise ordered: Nos. 3-GBA-50 and 60, £12 10s. 0d.; Nos. 3-GBA-70 to 130, £13 19s. 0d.

For particulars of Clock Control and Room Thermostat, see pages 174 and 175.

# ASBESTOS CEMENT FLUE PIPE AND FITTINGS



SOCKETED FLUE PIPE



PLAIN FLUE PIPE



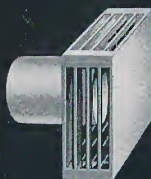
SQUARE BEND



OFFSET



OBTUSE BEND



VENTILE"  
TERMINAL



"G.L.C."  
TERMINAL



TAPER PIECE



TEE PIECE

Prices and dimensions, page 117.

# ASBESTOS CEMENT FLUE PIPE AND FITTINGS

## PRICES

Internal Diameter	Ins.	3	4½	6	8	10	12	14
Pipe socketed or plain, lengths 1 ft. to 6 ft. . . . .	per ft.	—/11½	1/6¾	2/4	4/6½	5/9	6/10½	8/1
Square Bends' . . . . .	each	2/4	3/6	4/8	14/8	16/5	20/9	24/9
Obtuse Bends, 100°, 110°, 120° and 135° . . . . .	each	2/4	3/6	4/8	14/8	16/5	20/9	24/9
Extra if bends supplied with door . . . . .		1/11½	2/7¼	2/7¼	4/3¾	5/3	5/3	5/3
*Tee Pieces, Equal, Square or Obtuse, 100°, 110°, 120° and 135° . . . . .		2/4	3/6	4/8	14/8	16/5	20/9	24/9
Offsets, 6", 8", 10", 12", 14", 16", 18" and 20" projection . .		4/8	7/—	9/4	20/9	25/10	31/1	—
Ventile Terminal . . . . .		10/3	13/6	16/8	21/1	—	—	—
G.L.C. Terminal . . . . .		6/4	7/5	8/11	13/7	19/5	26/1	—
Taper Pieces, with hole in base to pass ½-in. w.i. pipe . .		2/4½	3/9	5/1½	6/6	—	—	—

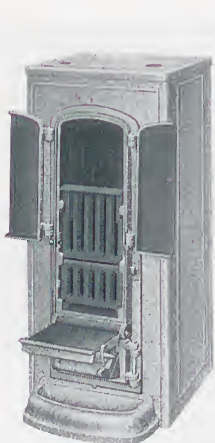
\* Can be supplied with socket on branch at small extra charge.

## DIMENSIONS IN INCHES

Internal Diameter .. ..	3	4½		8	10	12	14
External Diam. Spigot End ..	3¾	4¾	6½	8¾	10¾	13	15
Internal Diam. Socket End ..	3⅝	5⅝	6¾	9¼	11¼	13½	15½
Internal Depth of Socket ..	3	4	4	4	4	4	4
Face of socket to centre of spigot ..	6	8	9¼	12½	13½	14½	20¼
End of spigot to centre of socket ..							
For 90° Bends only.							
Tee Pieces centre to face ..	6⅓ <sub>16</sub>	8⅓ <sub>16</sub>	9½	11⅓ <sub>8</sub>	12½	13½	14½
Ventile Terminal— Dimension of face .. ..	7½ x 7½	9½ x 9½	12½ x 12½	16½ x 16½	—	—	—

IDEAL OPEN FIRE NEO-CLASSIC BOILERS

Regd. Design No. 783724/5  
For Water



View with Enamelled Jacket, Horizontal Smokehood and back flow.



View without Jacket, and with vertical flow and Smokehood.

No.	Ratings			PRICES								
	B.T.U. per hour	Direct Radiation  Sq. ft.	† External Surface B.T.U. per hour	Boiler only			With Insulating Galv. Steel Jacket			With Plate- work and Jacket Vitreous Enamelled *		
				£	s.	d.	£	s.	d.	£	s.	d.
NC-031	23,600	165	2,700	5	19	6	6	17	6	8	13	3
NC-041	33,200	230	3,100	7	8	9	8	10	3	10	9	6
NC-051	42,800	295	3,500	8	18	0	10	3	0	12	5	9
NC-061	52,400	360	3,900	10	7	3	11	15	9	14	2	0
NC-071	62,000	425	4,300	11	16	6	13	8	6	15	18	3

\* Grey, Green or Blue Mottle ; Grey Mottle supplied unless otherwise ordered.  
Cream enamelled jacket, with platework enamelled Black, extra, price on application.  
† Without Jacket.

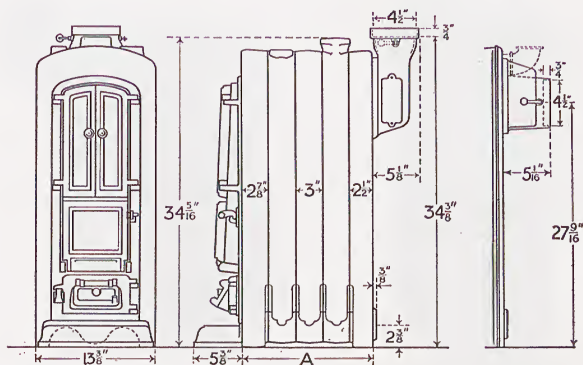
Stoking Tools per set : Nos. NC-031, 041 and 051 .. 9s. 1d.  
Nos. NC-061 and 071 .. 9s. 9d.  
Draw-off Cock, ½-in. .. .. 4s. 0d.  
No. 802 Ideal Damper Regulator (see page 175) £1 4s. 6d.

Grate Bars : Grill pattern.  
Stoking Tools : Supplied unless otherwise ordered (see page 159).  
Draw-off Cock : " " " ( " 177).  
Jacket : Supplied with enamelled boilers unless otherwise ordered.

# IDEAL OPEN FIRE NEO-CLASSIC BOILERS

Regd. Design No. 783724/5

For Water



Smokehood with Socket Outlet for spigot end of  $4\frac{1}{2}$ -in. cast iron smokepipe.

No.	Number of Sections	Water Contents	Fuel Capacity	Heating Surface	Length of Boiler A Ins.	Tappings	
						Flow Outlets on top*	†Returns at back
		Gals.	Cu. ft.	Sq. ft.		Number and Diam. in inches.	
NC-031	3	2.9	0.6	5.5	$8\frac{3}{8}$	1-2	1-2
NC-041	4	3.6	0.9	7.6	$11\frac{3}{8}$	1-2	1-2
NC-051	5	4.3	1.2	9.7	$14\frac{3}{8}$	1-2	1-2
NC-061	6	5.0	1.5	11.8	$17\frac{3}{8}$	1-2	1-2
NC-071	7	5.7	1.8	13.9	$20\frac{3}{8}$	1-2	1-2

**Vertical smokehood supplied unless horizontal is specified.**

\* Provided horizontal smokehood is ordered, a 2-in. flow connection on face of back section can be obtained by means of a street elbow (see diagram above).

† A  $1\frac{1}{2}$ -in. return tapping on either side can be provided to special order: distance from floor to centre,  $3\frac{7}{8}$  ins.

Return tappings on both sides of intermediate section can also be provided to special order.

These boilers also have one  $1\frac{1}{2}$ -in. and one  $\frac{1}{2}$ -in. tapping on top of second section for Regulator and Thermometer.

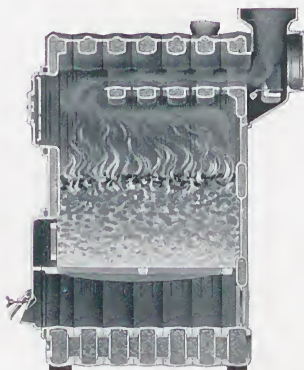
**For particulars and prices of smokepipe, elbows, etc., in enamel finishes, see pages 160 and 161.**



# IDEAL NEO-CLASSIC BOILERS

Nos. 1 and 2 Series.

For Water



No. 1.—Enamelled Jacket, Horizontal Smokehood and back flow.

No. 2.—Sectional view, showing flue travel and waterways.

No.	Rating			PRICES								
	B.T.U. per hour	Direct Radiation Sq. ft.	† External Surface B.T.U. per hour	Boiler only			With Insulating Galv. Steel Jacket			With Plate- work and Jacket Vitreous Enamelled*		
				£	s.	d.	£	s.	d.	£	s.	d.
NC31	23,600	165	2,700	5	19	6	6	17	6	8	13	3
NC41	33,200	230	3,100	7	8	9	8	10	3	10	9	6
NC51	42,800	295	3,500	8	18	0	10	3	0	12	5	9
NC61	52,400	360	3,900	10	7	3	11	15	9	14	2	0
NC71	62,000	425	4,300	11	16	6	13	8	6	15	18	3
NC42	62,000	425	4,500	11	17	0	13	8	6	16	1	6
NC52	76,200	525	5,300	14	2	0	15	19	0	18	17	0
NC62	90,400	625	6,100	16	7	0	18	9	6	21	12	6
NC72	104,600	725	6,900	18	12	0	21	0	0	24	8	0
NC82	118,800	825	7,700	20	17	0	23	10	6	27	3	6
NC92	133,000	925	8,500	23	2	0	26	1	0	29	19	0

\* Grey, Green or Blue Mottle; Grey Mottle supplied unless otherwise ordered.  
Cream enamelled jacket, with platework enamelled Black, extra, price on application.

† Without jacket.

Stoking Tools; per set: Nos. NC31–51, 9s. 1d.; NC61–71, 9s. 9d.  
Nos. NC42–52, 9s. 9d.; NC62–92, 14s. 3d.

Draw-off Cock, ½-in. . . . . 4s. 0d.

No. 802 Ideal Damper Regulator (see page 175) £1 4s. 6d.

Grate Bars: Grill pattern.

Stoking Tools: Supplied unless otherwise ordered (see page 159).

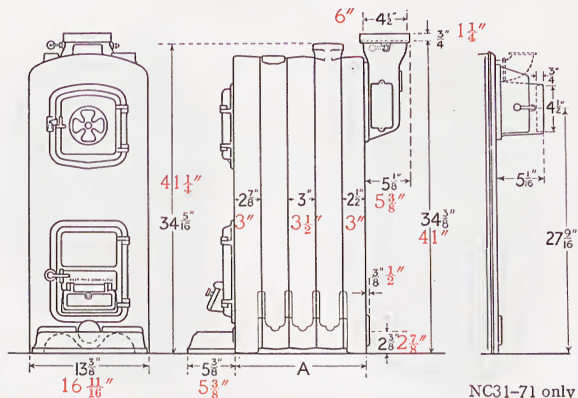
Draw-off Cock: " " ( " 177).

Jacket: Supplied with enamelled boilers unless otherwise ordered.



# IDEAL NEO-CLASSIC BOILERS

Nos. 1 and 2 Series. For Water



No. 2 Series Dimensions shown in red. Interchangeable smokehood, height from floor to centre of horizontal outlet, 36 ins.; projection, 6 5/8 ins.; projection to centre of vertical outlet, 2 5/8 ins.

Smokehoods with Socket Outlets for spigot end of cast iron smokepipe.

No.	Number of Sections	Water Contents	Fuel Capacity	Heating Surface	Length of Boiler A	Tappings	
						Flow Outlets on top*	†Returns at back
		Gals.	Cu. ft.	Sq. ft.	Ins.	No. and Diam. in ins.	
NC31	3	2.9	0.6	5.5	8 3/8	1—2	1—2
NC41	4	3.6	0.9	7.6	11 3/8	1—2	1—2
NC51	5	4.3	1.2	9.7	14 3/8	1—2	1—2
NC61	6	5.0	1.5	11.8	17 3/8	1—2	1—2
NC71	7	5.7	1.8	13.9	20 3/8	1—2	1—2
NC42	4	5.9	1.4	14.0	13	1—2 1/2	1—2 1/2
NC52	5	7.0	1.9	17.2	16 1/2	1—2 1/2	1—2 1/2
NC62	6	8.1	2.4	20.4	20	1—2 1/2	1—2 1/2
NC72	7	9.2	2.8	23.6	23 1/2	1—2 1/2	1—2 1/2
NC82	8	10.3	3.4	26.8	27	1—2 1/2	1—2 1/2
NC92	9	11.4	3.9	30.1	30 1/2	1—2 1/2	1—2 1/2

Vertical smokehood supplied with Nos. NC31-71, unless horizontal is specified.

\* Nos. NC31-71. Provided horizontal smokehood is ordered, a 2-in. flow connection on face of back section can be obtained by means of a street elbow (see diagram above).

† A return tapping on either side can be provided to special order:

Nos. NC31-71, 1 1/2-in.; distance from floor to centre, 3 7/8 ins.

Nos. NC42-92, 2-in. " " " " 5 1/2 "

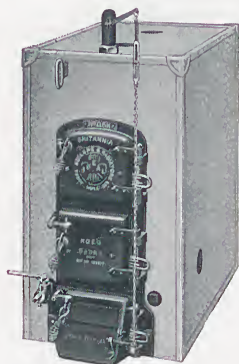
Return tappings on both sides of intermediate section can also be provided to special order.

These boilers also have one 1 1/2-in. and one 1/2-in. tapping on top of second section for Regulator and Thermometer.

For particulars and prices of smokepipe, elbows, etc., in enamel finishes, see pages 160 and 161.

# IDEAL Nos. 0-K & 0-KF BRITANNIA BOILERS

For Water



With Insulating Jacket.



†With Front Smokehood.  
Without Jacket.

No.	Heat- ing Surface	Ratings			PRICES						
		B.T.U. per hour	Direct Radiation	Lineal Feet of 4-in. Pipe	Boiler only			Insulating Galvanised Steel Jacket *			Stoking Tools
	Sq. ft.				£	s.	d.	£	s.	d.	
03K	9.0	40,000	280	215	9	0	6	1	9	3	11 5
04K	11.5	51,000	355	275	10	19	6	1	15	9	11 5
05K	14.0	62,000	430	335	12	18	6	2	2	3	11 5
06K	16.5	73,000	505	395	14	17	6	2	8	9	13 0
07K	19.0	84,000	580	455	16	16	6	2	15	3	13 0

\* Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for  
enlarging Boilers .. .. each £1 19s. 0d.  
Ditto, including Jacket extension pieces .. .. „ 2 7 0

When automatic regulation is not required, a sliding ashpit door can be supplied in place of the hinged pattern illustrated.

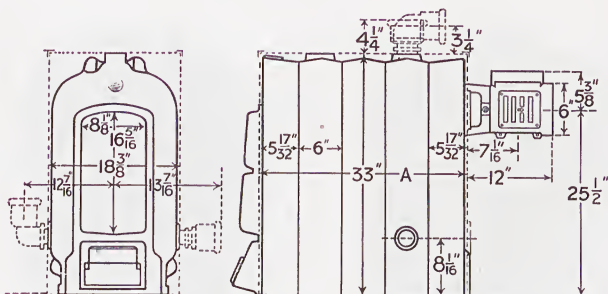
No. 802 Ideal Damper Regulator (see page 175) .. £1 4s. 6d.  
Draw-off Cock,  $\frac{3}{4}$ -in. .. .. 4 11

Grate Bars : Grill pattern.  
Stoking Tools : Supplied unless otherwise ordered (see page 159).  
Draw-off Cock : „ „ „ „ ( „ 177).  
Jacket : When ordering Jacket, state position of flow and return tappings.

† When ordering boilers with smokehood at front, add the letter F to Fig. No., thus : 03KF, 04KF, etc.

## IDEAL Nos. 0-K & 0-KF BRITANNIA BOILERS

### For Water



Universal Smokhood with Socket Outlet at back, top or side for spigot end of 6-in. cast iron smokepipe; fitted with checkdraught damper and cleaning door.

When fitted with Smokehood at front, the height from floor to top of smoke outlet is  $37\frac{7}{16}$  ins.

No.	Number of Sections	Capacities		Length of Boiler  A ↑ Ins.	Tappings‡	
		Water	Fuel		Flow Outlets at top	Returns at bottom, either side
03K	3	7·1	1·4	17 $\frac{1}{16}$	1-2	1-2
04K	4	8·8	2·1	23 $\frac{1}{16}$	1-2	1-2
05K	5	10·5	2·8	29 $\frac{1}{16}$	2-2	2-2
06K	6	12·2	3·5	35 $\frac{1}{16}$	2-2	2-2
07K	7	13·9	4·2	41 $\frac{1}{16}$	2-2	2-2

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

‡ **No. 0-K Series.**—A 2½-in. return tapping on face of back section can be supplied. Height from floor to centre, 8½ ins.

‡ **No. 0-KF Series** (Front Smokehood).—2½-in. flow and return tappings on face of back section can be supplied to special order. Distance from floor to centre of flow 30 ins., return 8½ ins.

Intermediate sections of these boilers can be supplied with return tappings on each side.

In addition to the openings mentioned above, all boilers have one 1½-in. tapping on top of front section.

For Boiler Fittings and Connections, see page 164.

# IDEAL Nos. 1-K & 1-KF BRITANNIA BOILERS

For Water



With Insulating Jacket.



† With Front Smokehood.  
Without Jacket.

No.	Heating Surface Sq. ft.	Ratings			PRICES								
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler only			Insulating Galvanised Steel Jacket *			Stoking Tools		
					£	s.	d.	£	s.	d.	£	s.	d.
14K	21.0	93,000	650	500	17	13	0	2	8	6	19	1	
15K	26.5	117,000	815	630	20	15	6	2	15	9	19	1	
16K	32.0	141,000	980	760	23	18	0	3	3	0	1	1	2
17K	37.5	165,000	1,145	890	27	0	6	3	10	3	1	1	2
18K	43.0	189,000	1,310	1,020	30	3	0	3	17	6	1	4	0

\* Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made .

Extra Middle Sections, with necessary nipples for

enlarging Boilers . . . . . each £3 2s. 6d.

Ditto, including jacket extension pieces . . . . . 3 11 6

When automatic regulation is not required, a sliding ashpit door can be supplied in place of the hinged pattern illustrated.

No. 802 Ideal Damper Regulator (see page 175) . . £1 4s. 6d.

Draw-off Cock,  $\frac{3}{4}$ -in. . . . . 4 11

Grate Bars : Grill pattern.

Stoking Tools : Supplied unless otherwise ordered (see page 159).

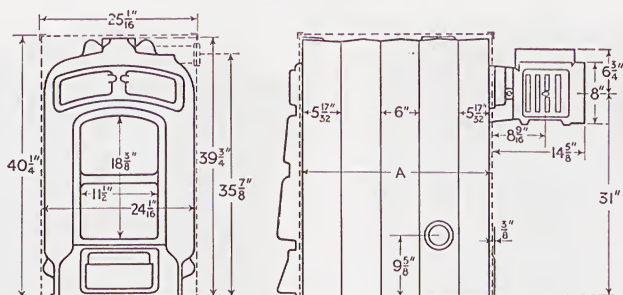
Draw-off Cock : " " " " ( " 177).

Jacket : When ordering Jacket, state position of flow and return tappings.

† When ordering boilers with smokehood at front, add the letter F to Fig. No., thus : 14KF, 15KF, etc.

## IDEAL Nos. 1-K &amp; 1-KF BRITANNIA BOILERS

For Water



Universal Smokehood with Socket Outlet at back, top or side for spigot end of 8-in. cast iron smokepipe; fitted with checkdraught damper and cleaning door.

When fitted with smokehood at front, the height from floor to top of smoke outlet is 40 3/4 ins.

No.	Number of Sections	Capacities		Length of Boiler  A † Ins.	Tappings‡	
		Water	Fuel		Flow Outlets at top	Returns at bottom, either side
		Gals.	*Cu. ft.	Number and Diam. in inches		
14K	4	14.4	2.6	23 $\frac{1}{16}$	1-3	1-3
15K	5	17.6	3.5	29 $\frac{1}{16}$	1-3	1-3
16K	6	20.8	4.4	35 $\frac{1}{16}$	1-3	1-3
17K	7	24.0	5.3	41 $\frac{1}{16}$	2-3	2-3
18K	8	27.2	6.2	47 $\frac{1}{16}$	2-3	2-3

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

‡ **No. 1-K Series.**—A 4-in. flanged return connection on face of back section can be furnished. Height from floor to centre 10 1/16 ins.

‡ **No. 1-KF Series (Front Smokehood).**—4-in. flanged flow and return openings on face of back section can be supplied. Distance from floor to centre of flow 36 1/2 ins., return 10 1/16 ins.

No extra charge is made if supplied in place of the connections shown above.

Intermediate sections of these boilers can be supplied with return tappings on each side.

A special intermediate section can be supplied with a 3-in. screwed tapping on shoulder for horizontal flow connection. Distance from floor to centre, 35 7/8 ins.; see diagram above and page 165.

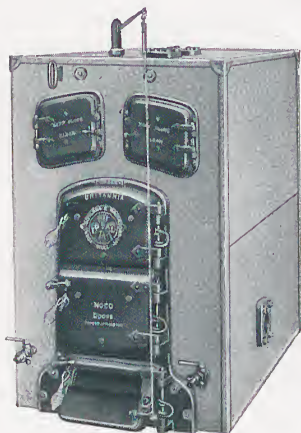
In addition to the openings mentioned above, all boilers have one 1 1/2-in. and one 1-in. tappings on top of front section.

**For Boiler Fittings and Connections, see page 164.**

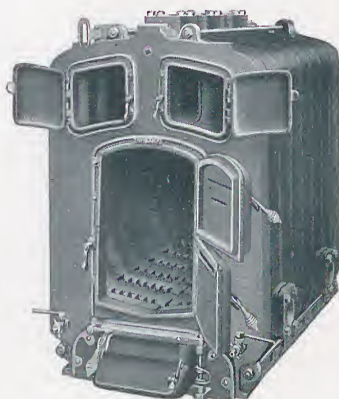


# IDEAL No. 2-K BRITANNIA BOILERS

For Water



With Insulating Jacket.



Without Jacket.

No.	Heating Surface Sq. ft.	Ratings			PRICES								
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler only			Insulating Galvanised Steel Jacket *			Stoking Tools		
					£	s.	d.	£	s.	d.	£	s.	d.
24K	35.5	159,000	1,100	860	28	12	0	3	7	6	19	1	
25K	45.0	200,000	1,385	1,080	33	14	0	3	16	6	19	1	
26K	54.5	241,000	1,670	1,300	38	16	0	4	5	6	1	1	2
27K	64.0	282,000	1,955	1,520	43	18	0	4	14	6	1	1	2
28K	73.5	323,000	2,240	1,740	49	0	0	5	3	6	1	4	0
29K	83.0	364,000	2,525	1,960	54	2	0	5	12	6	1	4	0

\* Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for enlarging Boilers .. .. each £5 2s. 0d.

Ditto, including jacket extension pieces .. .. 5 13 0

When automatic regulation is not required, a sliding ashpit door can be supplied in place of the hinged pattern illustrated.

**No. 802 Ideal Damper Regulator** (see page 175) .. £1 4s. 6d.

**Draw-off Cocks,  $\frac{3}{4}$ -in.** .. .. each 4 11

Grate Bars : Water-cooled. Grill pattern can be supplied.

Stoking Tools : Supplied unless otherwise ordered (see page 159).

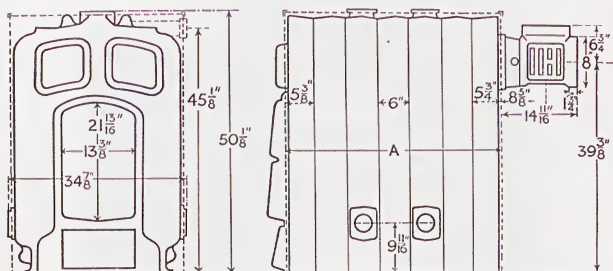
Draw-off Cocks (2) : " " " ( " 177).

Jacket : When ordering Jacket, state position of flow and return tapplings.



# IDEAL No. 2-K BRITANNIA BOILERS

For Water



Universal Smokehood with Socket Outlet at back, top or side for spigot end of 8-in. cast iron smokepipe; fitted with checkdraught damper and cleaning door.

No.	Number of Sections	Capacities		Length of Boiler  A ↑ Ins.	Flanged Connections†	
		Water	Fuel		Flow Outlets at top	Returns at bottom, either side
		Gals.	*Cu. ft.		Number and Diam. in inches	
24K	4	25.0	4.0	$23\frac{1}{8}$	2-4	2-4
25K	5	30.6	5.4	$29\frac{1}{8}$	2-4	2-4
26K	6	36.2	6.8	$35\frac{1}{8}$	2-4	2-4
27K	7	41.8	8.2	$41\frac{1}{8}$	3-4	3-4
28K	8	47.4	9.6	$47\frac{1}{8}$	3-4	3-4
29K	9	53.0	11.0	$53\frac{1}{8}$	3-4	3-4

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

‡ On special order, two 3-in. Flanged Return Connections on face of back section can be provided. Distance from floor to centre,  $8\frac{7}{16}$  ins. ; centre to centre,  $24\frac{5}{8}$  ins.

Intermediate sections can be supplied with flanged return connections on each side ; see page 165.

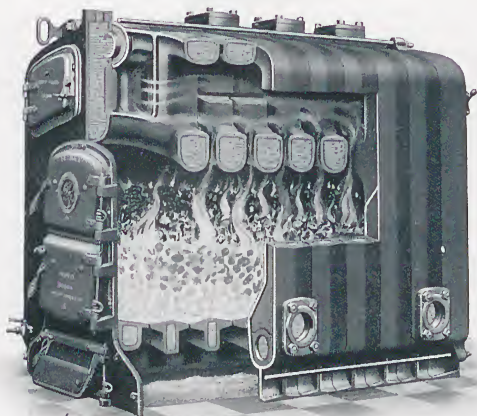
A special intermediate section can be supplied, with a 3-in. tapped flange on shoulder for horizontal flow connection. Distance from floor to centre,  $45\frac{1}{8}$  ins. ; see diagram above and page 165.

In addition to the openings mentioned above, all boilers have one  $1\frac{1}{2}$ -in. and two 1-in. tappings on top of front section.

**For Boiler Fittings and Connections, see pages 164 and 165.**

# IDEAL No. 3-K BRITANNIA BOILERS

For Water



No.	Heating Surface Sq. ft.	Ratings			PRICES								
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler only			Insulating Galvanised Steel Jacket *			Stoking Tools		
					£	s.	d.	£	s.	d.	£	s.	d.
35K	70.5	313,000	2,170	1,695	49	12	0	4	17	0	1	2	6
36K	85.5	379,000	2,630	2,050	57	5	0	5	10	9	1	2	6
37K	100.5	445,000	3,090	2,405	64	18	0	6	4	6	1	6	0
38K	115.5	511,000	3,550	2,760	72	11	0	6	18	3	1	6	0
39K	130.5	577,000	4,010	3,115	80	4	0	7	12	0	1	11	3
310K	145.5	643,000	4,470	3,470	87	17	0	8	5	9	1	11	3
311K	160.5	709,000	4,930	3,825	95	10	0	8	19	6	1	13	6

\* Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for enlarging Boilers . . . . each £7 13s. 0d.

Ditto, including jacket extension pieces . . . . , 8 9 0

When automatic regulation is not required, a sliding ashpit door can be supplied in place of the hinged pattern illustrated.

No. 802 Ideal Damper Regulator (see page 175) £1 4s. 6d.

Draw-off Cocks, 1-in. . . . . each 7 6

Grate Bars : Water cooled. Grill pattern can be supplied.

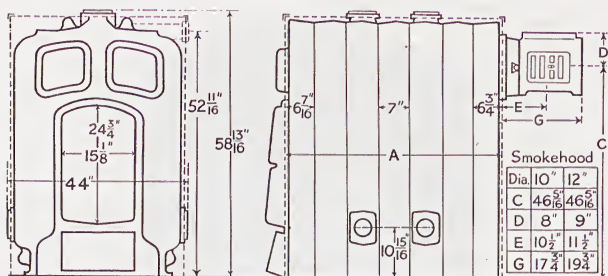
Stoking Tools : Supplied unless otherwise ordered (see page 159).

Draw-off Cocks (2) : " " " " ( " " 177).

Jacket : When ordering Jacket, state position of flow and return tappings.

# IDEAL No. 3-K BRITANNIA BOILERS

For Water



Diam. of Smoke Outlet : Nos. 35-38, 10 ins. ; Nos. 39-311, 12 ins.

Universal Smokehood with Socket Outlet at back, top or side for spigot end of cast iron smokepipe ; fitted with checkdraught damper and cleaning door.

No.	Number of Sections	Capacity		Length of Boiler A ↑ Ins.	Flanged Connections‡	
		Water	Fuel		Flow Outlets at top	Returns at bottom, either side
					Number and Diam. in inches	
35K	5	67.4	9.1	34 $\frac{3}{16}$	2-4	2-4
36K	6	79.8	11.5	41 $\frac{3}{16}$	2-4	2-4
37K	7	92.1	13.8	48 $\frac{3}{16}$	2-4	2-4
38K	8	104.5	16.2	55 $\frac{3}{16}$	3-4	3-4
39K	9	116.8	18.6	62 $\frac{3}{16}$	3-4	3-4
310K	10	129.2	21.0	69 $\frac{3}{16}$	3-4	3-4
311K	11	141.6	23.4	76 $\frac{3}{16}$	3-4	3-4

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

‡ 5-in. Flanged Flow and Return Connections can be supplied in place of the above.

On special order, two 4-in. Flanged Return Connections on face of back section can be provided. Distance from floor to centre, 9 3/8 ins. ; centre to centre, 33 ins. These openings can also be provided to enable two or more boilers to be connected in battery form.

A special intermediate section can be supplied, with a 4-in. tapped flange on shoulder for horizontal flow connection. Distance from floor to centre, 52 11/16 ins. ; see diagram above and page 165.

Intermediate sections can be furnished with flanged return connections on each side ; see page 165.

In addition to the openings mentioned above, all boilers have two 1 1/4-in., one 1 1/2-in. and one 1/2-in. tappings on top of front section.

For batteries of two or more boilers of the same size, a single jacket can be supplied ; distance from centre to centre of boilers, 41 3/4 ins.

For Boiler Fittings and Connections, see pages 164 and 165.

# IDEAL No. 4-K BRITANNIA BOILERS

For Water



Without Jacket.

No.	Heating Surface Sq. ft.	Ratings			PRICES								
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler only			Insulating Galvanised Steel Jacket			Stoking Tools		
					£	s.	d.	£	s.	d.	£	s.	d.
47K	141	625,000	4,340	3,370	89	7	6	7	16	6	1	8	0
48K	162	718,000	4,985	3,875	102	6	6	8	10	6	1	8	0
49K	183	811,000	5,630	4,380	115	5	6	9	4	6	1	12	9
410K	204	904,000	6,275	4,885	128	4	6	9	18	6	1	12	9
411K	225	997,000	6,920	5,390	141	3	6	10	12	6	1	13	6
412K	246	1,090,000	7,565	5,895	154	2	6	11	6	6	1	13	6
413K	267	1,183,000	8,210	6,400	167	1	6	12	0	6	1	13	6
414K	288	1,276,000	8,855	6,905	180	0	6	12	14	6	1	13	6

\* Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for enlarging Boilers .. .. . each **£12 19s. 0d.**

Ditto, including jacket extension pieces .. .. , **13 17 0**

When automatic regulation is not required, a sliding ashpit door can be supplied in place of the hinged pattern illustrated.

**No. 802 Ideal Damper Regulator** (see page 175) **£1 4s. 6d.**

**Draw-off Cocks, 1-in.** .. .. . each **7 6**

Grate Bars : Water cooled. Grill pattern can be supplied.

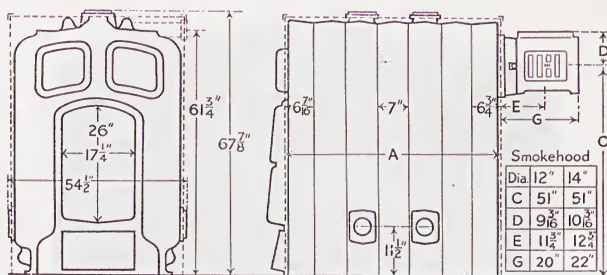
Stoking Tools : Supplied unless otherwise ordered (see page 159).

Draw-off Cocks (2) : " " " " ( " " 177).

Jacket : When ordering Jacket, state position of flow and return tappings.

# IDEAL No. 4-K BRITANNIA BOILERS

For Water



Diam. of Smoke Outlet : Nos. 47-411, 12 ins. ; Nos. 412-414, 14 ins.

Universal Smokehood with Socket Outlet at back, top or side for spigot end of cast iron smokepipe ; fitted with checkdraught damper and cleaning door.

No.	Number of Sections	Capacities		Length of Boiler A † Ins.	Flanged Connections‡	
		Water	Fuel		Flow Outlets at top	Returns at bottom, either side
		Gals.	*Cu. ft.		Number and Diam. in inches.	
47K	7	138.6	17.4	48 <sup>3</sup> / <sub>16</sub>	2-4	2-4
48K	8	157.2	20.4	55 <sup>3</sup> / <sub>16</sub>	2-4	2-4
49K	9	175.9	23.4	62 <sup>3</sup> / <sub>16</sub>	3-4	3-4
410K	10	194.6	26.4	69 <sup>3</sup> / <sub>16</sub>	3-4	3-4
411K	11	213.3	29.4	76 <sup>3</sup> / <sub>16</sub>	4-4	4-4
412K	12	232.0	32.4	83 <sup>3</sup> / <sub>16</sub>	4-4	4-4
413K	13	250.6	35.4	90 <sup>3</sup> / <sub>16</sub>	4-4	4-4
414K	14	269.2	38.4	97 <sup>3</sup> / <sub>16</sub>	4-4	4-4

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

‡ 5-in. and 6-in. flanged flow and return connections can be supplied in place of the above. For 6-in. connections, an adapter is used, increasing height or width of boiler 4 ins. ; 6-in. flanged sockets can also be supplied.

On special order, two 4-in. flanged return connections on face of back section can be provided. Distance from floor to centre, 97 <sup>7</sup>/<sub>8</sub> ins. ; centre to centre, 43 ins. These openings can also be provided to enable two or more boilers to be connected in battery form.

A special intermediate section can be supplied, with a 4-in. tapped flange on shoulder for horizontal flow connection. Distance from floor to centre, 61 <sup>3</sup>/<sub>4</sub> ins. ; see diagram above and page 165.

Intermediate sections can be furnished with flanged return connections on each side ; see page 165.

In addition to the openings mentioned above, all boilers have one 2-in., two 1 <sup>1</sup>/<sub>2</sub>-in. and one <sup>1</sup>/<sub>2</sub>-in. tapings on top of front section.

For batteries of two or more boilers of the same size, a single jacket can be supplied ; distance from centre to centre of boilers, 52 <sup>1</sup>/<sub>4</sub> ins.

For Boiler Fittings and Connections, see pages 164 and 165.



# IDEAL BRITANNIA BOILERS FOR OIL FUEL

## Capacities and Prices

No.	Heating Surface  Sq. ft.	Rating B.T.U. per hour	PRICES					
			Boiler only, less grate bars			Insulating Galv. Steel Jacket*		
			£	s.	d.	£	s.	d.
03KO	9.0	40,000	8	14	6	1	9	3
04KO	11.5	51,000	10	11	6	1	15	9
05KO	14.0	62,000	12	8	6	2	2	3
06KO	16.5	73,000	14	5	6	2	8	9
07KO	19.0	84,000	16	2	6	2	15	3
14KO	21.0	93,000	17	1	0	2	8	6
15KO	26.5	117,000	20	0	6	2	15	9
16KO	32.0	141,000	23	0	0	3	3	0
17KO	37.5	165,000	25	19	6	3	10	3
18KO	43.0	189,000	28	19	0	3	17	6
19KO	48.5	213,000	31	18	6	4	4	9
110KO	54.0	237,000	34	18	0	4	12	0
24KO	35.5	159,000	27	12	0	3	7	6
25KO	45.0	200,000	32	9	0	3	16	6
26KO	54.5	241,000	37	6	0	4	5	6
27KO	64.0	282,000	42	3	0	4	14	6
28KO	73.5	323,000	47	0	0	5	3	6
29KO	83.0	364,000	51	17	0	5	12	6
210KO	92.5	405,000	56	14	0	6	1	6
211KO	102.0	446,000	61	11	0	6	10	6
212KO	111.5	487,000	66	8	0	6	19	6
35KO	70.5	313,000	47	19	6	4	17	0
36KO	85.5	379,000	55	6	0	5	10	9
37KO	100.5	445,000	62	12	6	6	4	6
38KO	115.5	511,000	69	19	0	6	18	3
39KO	130.5	577,000	77	5	6	7	12	0
310KO	145.5	643,000	84	12	0	8	5	9
311KO	160.5	709,000	91	18	6	8	19	6
312KO	175.5	775,000	99	5	0	9	13	3
313KO	190.5	841,000	106	11	6	10	7	0
47KO	141	625,000	85	17	6	7	16	6
48KO	162	718,000	98	6	6	8	10	6
49KO	183	811,000	110	15	6	9	4	6
410KO	204	904,000	123	4	6	9	18	6
411KO	225	997,000	135	13	6	10	12	6
412KO	246	1,090,000	148	2	6	11	6	6
413KO	267	1,183,000	160	11	6	12	0	6
414KO	288	1,276,000	173	0	6	12	14	6
415KO	309	1,369,000	185	9	6	13	8	6
416KO	330	1,462,000	197	18	6	14	2	6

\* Jacket and doors can be supplied in vitreous enamel finish ; prices on application.  
Jacket can be fitted after pipe connections have been made.

Draw-off Cocks : each,  $\frac{3}{4}$ -in., 4s. 11d. ; 1-in., 7s. 6d.

Draw-off Cocks (one  $\frac{3}{4}$ -in. with Nos. 0 and 1 Series, two  $\frac{3}{4}$ -in. with No. 2 Series, and two 1-in. with Nos. 3 and 4 Series) sent with boilers unless otherwise ordered.

Jacket : When ordering Jacket, state position of flow and return tappings.



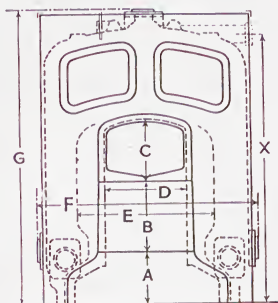
## IDEAL BRITANNIA BOILERS FOR OIL FUEL

No.	Inside Firebox at Grate Level		Available Combustion Chamber  Cu. ft.	Burner Capacity  Lb. Oil per hour	*Set of flue baffles comprises
	Width Ins.	Length Ins.			
03KO	13	13	1.7	3.4	—
04KO	13	19	2.5	4.4	—
05KO	13	25	3.4	5.4	—
06KO	13	31	4.2	6.4	—
07KO	13	37	5.0	7.4	—
14KO	18	17	3.4	6.8	—
15KO	18	23	4.5	8.4	† 1 pair
16KO	18	29	5.6	10.0	† 2 pairs
17KO	18	35	6.7	11.7	† 2 „
18KO	18	41	7.8	13.3	† 3 „
19KO	18	47	8.9	14.9	† 3 „
110KO	18	53	10.0	16.5	† 4 „
24KO	25	17	5.0	11.4	1 pair
25KO	25	23	6.7	14.2	2 pairs
26KO	25	29	8.4	17.0	2 „
27KO	25	35	10.1	19.8	3 „
28KO	25	41	11.8	22.6	4 „
29KO	25	47	13.5	25.5	4 „
210KO	25	53	15.2	28.4	5 „
211KO	25	59	16.9	31.2	5 „
212KO	25	65	18.6	34.0	6 „
35KO	30	27	11.4	22.0	1 pair
36KO	30	34	14.3	26.6	2 pairs
37KO	30	41	17.2	31.2	3 „
38KO	30	48	20.1	35.8	4 „
39KO	30	55	23.0	40.4	4 „
310KO	30	62	25.9	45.0	5 „
311KO	30	69	28.8	49.6	5 „
312KO	30	76	31.7	54.2	6 „
313KO	30	83	34.6	58.8	7 „
47KO	38	41	21.7	43.8	3 „
48KO	38	48	25.4	50.3	4 „
49KO	38	55	29.2	56.8	4 „
410KO	38	62	32.9	63.3	5 „
411KO	38	69	36.6	69.8	5 „
412KO	38	76	40.3	76.3	6 „
413KO	38	83	43.9	82.8	7 „
414KO	38	90	47.6	89.3	7 „
415KO	38	97	51.3	95.8	8 „
416KO	38	104	55.0	102.3	9 „

\* Baffles placed in uptakes, starting from the front section.

† To be placed in uptakes, starting from smokehood end of boiler.

# IDEAL BRITANNIA BOILERS FOR OIL FUEL



Dimensions in Inches

No.	Connections		A	B	C	D	E	F	G	X
	Flow	Return								
03 to 04KO	1-2"	1-2"	7 $\frac{1}{16}$	10 $\frac{1}{4}$	7 $\frac{13}{16}$	8 $\frac{1}{2}$	13 $\frac{1}{2}$	18 $\frac{3}{8}$	33	—
05 „ 07KO	2-2"	2-2"								
14 „ 16KO	1-3"	1-3"	8	10 $\frac{1}{2}$	9 $\frac{3}{8}$	12	18 $\frac{1}{4}$	24 $\frac{1}{16}$	39 $\frac{1}{2}$	35 $\frac{7}{8}$
17 „ 110KO	2-3"	2-3"								
24 „ 26KO	2-3"	2-3"	8 $\frac{7}{8}$	12 $\frac{3}{8}$	11	14	25 $\frac{1}{4}$	34 $\frac{3}{8}$	50	45 $\frac{1}{8}$
27 „ 212KO	3-3"	3-3"								
35 „ 37KO	2-4"	2-4"	9 $\frac{9}{16}$	15 $\frac{1}{4}$	11 $\frac{7}{16}$	16	30 $\frac{1}{2}$	44	58 $\frac{13}{16}$	52 $\frac{11}{16}$
38 „ 313KO	3-4"	3-4"								
47 „ 48KO	2-4"	2-4"	10 $\frac{5}{16}$	15 $\frac{1}{4}$	13 $\frac{5}{16}$	18	39	54 $\frac{1}{2}$	67 $\frac{7}{8}$	61 $\frac{3}{4}$
49 „ 410KO	3-4"	3-4"								
411 „ 416KO	4-4"	4-4"								

**No. 0-KO Britannia.** 2½-in. return tapping on face of back section can be provided to special order. Height from floor to centre, 8½ ins.

**No. 1-KO Britannia.** 4-in. flanged return connection on face of back section can be supplied to special order. Height from floor to centre, 10  $\frac{1}{16}$  ins.

**No. 2-KO Britannia.** Two 3-in. flanged openings are provided on face of back section and special headers are supplied free of charge for connecting them together, see pages 162 and 163. No. 222 will be supplied unless No. 224 is specified. Where the regular side returns are being used, these headers are sent with blank flanges.

**No. 3-KO Britannia.** 5-in. flanged flow and return connections can be supplied in place of those listed above. Two 4-in. flanged openings are provided on face of back section and special headers are supplied free for connecting them together, see pages 162 and 163. No. 212 will be supplied unless No. 214 is specified. Where the regular side returns are being used, these headers are sent with blank flanges.

**No. 4-KO Britannia.** 5-in. and 6-in. flanged flow and return connections can be supplied in place of those listed above. For 6-in. connections an adapter is used, increasing height or width of boiler 4 ins. Two 4-in. flanged openings are provided on face of back section and special headers are supplied free for connecting them together, see pages 162 and 163. No. 202 will be supplied unless No. 204 is specified. Where the regular side returns are being used, these headers are sent with blank flanges.

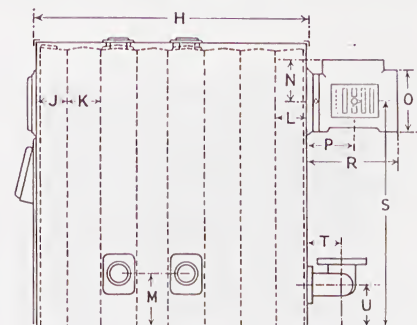
A special intermediate section can be supplied for above boilers (excepting No. 0 Series), giving a horizontal flow connection on shoulder as follows:

No. 1 Series—3-in. screwed tapping; No. 2 Series—3-in., and Nos. 3 and 4 Series—4-in. tapped flange; see diagram above and page 165.

Intermediate sections of all boilers can be supplied with return tappings on each side, see page 165.

**For Boiler Fittings and Connections, see pages 164 and 165.**

## IDEAL BRITANNIA BOILERS FOR OIL FUEL



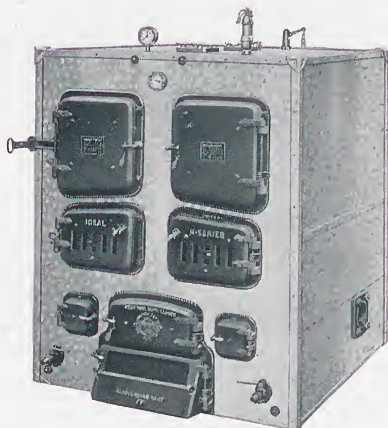
Universal Smokehood with Socket Outlet at back, top or side for spigot end of cast iron smokepipe ; fitted with checkdraught damper and cleaning door.

## Dimensions in Inches

No.	H	J	K	L	M	N	O	P	R	S	T	U
03KO	18	5 $\frac{11}{16}$	6	5 $\frac{11}{16}$	8 $\frac{1}{16}$	5 $\frac{3}{8}$	6	7 $\frac{1}{16}$	12	25 $\frac{7}{16}$	—	8 $\frac{1}{16}$
04KO	24											
05KO	30											
06KO	36											
07KO	42											
14KO	24 $\frac{1}{16}$	5 $\frac{11}{16}$	6	5 $\frac{11}{16}$	9 $\frac{5}{8}$	6 $\frac{3}{4}$	8	8 $\frac{9}{16}$	14 $\frac{5}{8}$	31	—	10 $\frac{1}{16}$
15KO	30 $\frac{1}{16}$											
16KO	36 $\frac{1}{16}$											
17KO	42 $\frac{1}{16}$											
18KO	48 $\frac{1}{16}$											
19KO	54 $\frac{1}{16}$	5 $\frac{3}{8}$	6	5 $\frac{3}{4}$	9 $\frac{11}{16}$	6 $\frac{3}{4}$	8	8 $\frac{5}{8}$	14 $\frac{11}{16}$	39	5	8 $\frac{7}{16}$
210KO	60 $\frac{1}{8}$											
211KO	66 $\frac{1}{8}$											
212KO	72 $\frac{1}{8}$											
35KO	35 $\frac{3}{16}$	6 $\frac{7}{16}$	7	6 $\frac{3}{4}$	10 $\frac{15}{16}$	9	12	11 $\frac{1}{2}$	19 $\frac{3}{4}$	46 $\frac{5}{16}$	7	9 $\frac{3}{8}$
36KO	42 $\frac{3}{16}$											
37KO	49 $\frac{3}{16}$											
38KO	56 $\frac{3}{16}$											
39KO	63 $\frac{3}{16}$											
310KO	70 $\frac{3}{16}$	6 $\frac{7}{16}$	7	6 $\frac{3}{4}$	11 $\frac{1}{2}$	9	12	11 $\frac{1}{2}$	19 $\frac{3}{4}$	51	7	9 $\frac{3}{8}$
311KO	77 $\frac{3}{16}$											
312KO	84 $\frac{3}{16}$											
313KO	91 $\frac{3}{16}$											
47KO	49 $\frac{5}{16}$	6 $\frac{7}{16}$	7	6 $\frac{3}{4}$	11 $\frac{1}{2}$	10	14	12 $\frac{3}{4}$	22	51	7	9 $\frac{3}{8}$
48KO	56 $\frac{5}{16}$											
49KO	63 $\frac{5}{16}$											
410KO	70 $\frac{5}{16}$											
411KO	77 $\frac{5}{16}$											
412KO	84 $\frac{5}{16}$	6 $\frac{7}{16}$	7	6 $\frac{3}{4}$	11 $\frac{1}{2}$	10	14	12 $\frac{3}{4}$	22	51	7	9 $\frac{3}{8}$
413KO	91 $\frac{5}{16}$											
414KO	98 $\frac{5}{16}$											
415KO	105 $\frac{5}{16}$											
416KO	112 $\frac{5}{16}$											

# IDEAL No. 6 " R " SERIES BOILERS

For Water



No.	Heating Surface Sq. ft.	Ratings			PRICES								
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler only			Insulating Galvanised Steel Jacket *			Stoking Tools		
					£	s.	d.	£	s.	d.	£	s.	d.
6-R-7	255	1,128,000	7,830	6,100	159	11	0	12	0	0	1	8	0
6-R-8	292	1,292,000	8,970	6,985	182	15	0	13	15	6	1	8	0
6-R-9	329	1,456,000	10,110	7,870	205	19	0	15	11	0	1	12	9
6-R-10	366	1,620,000	11,250	8,755	229	3	0	17	6	6	1	12	9
6-R-11	403	1,784,000	12,390	9,640	252	7	0	19	2	0	1	13	6
6-R-12	440	1,948,000	13,530	10,525	275	11	0	20	17	6	1	13	6
6-R-13	477	2,112,000	14,670	11,410	298	15	0	22	13	0	1	18	6

\* Jacket and doors can be supplied in vitreous enamel finish ; prices on application. Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for  
enlarging Boilers .. .. each £23 4s. 0d.

Ditto, including jacket extension pieces .. .. 25 2 9

**No. 802 Ideal Damper Regulator** (see page 175) 1 4 6  
(Damper regulator is fitted at the back of boiler.)

**Draw-off Cocks, 1½-in.** .. .. each 11 9

Grate Bars : Grill Pattern.

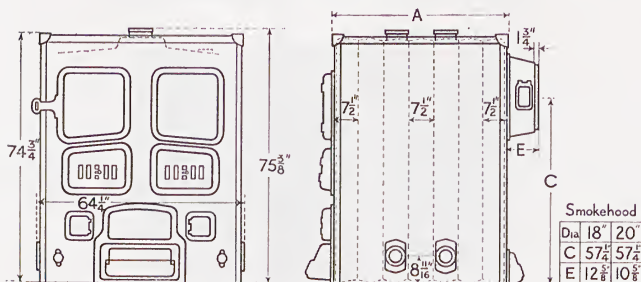
Stoking Tools : Supplied unless otherwise ordered (see page 159).

Draw-off Cocks (2) : " " " " ( " " 177).

Jacket : When ordering Jacket, state position of flow and return tappings.

## IDEAL No. 6 "R" SERIES BOILERS

For Water



Outside Diameter of Smoke Outlet : No. 6-R-7 to 11, 18 ins. ; No. 6-R-12 to 13, 20 ins.

No.	Number of Sections	Capacities		Length of Boiler A † Ins.	Flanged Connections.	
					Flow Outlets at top	Returns at bottom, either side.
		Water Gals.	Fuel *Cu. ft.		Number and Diam. in inches.	
6-R-7	7	162.3	30.9	53 1/2	2-5	2-5
6-R-8	8	182.5	35.8	61	2-5	2-5
6-R-9	9	202.7	40.7	68 1/2	2-5	2-5
6-R-10	10	222.9	45.6	76	3-5	3-5
6-R-11	11	243.1	50.5	83 1/2	3-5	3-5
6-R-12	12	263.3	55.4	91	4-5	4-5
6-R-13	13	283.5	60.3	98 1/2	4-5	4-5

\* Available for fuel under working conditions.

**Draught at smokehood outlet should not exceed 0.2 in. w.g.**

† **For Foundation and Ashpit Dimensions, see pages 74 and 75.**

Two 5-in. return openings are provided on face of back section and fitted with blank flanges unless tapped flanges are specified on order. Distance from floor to centre, 8 1/2 ins. ; centre to centre, 50 ins.

Flanged return on each side of certain intermediate sections can be supplied to special order.

In addition to the openings mentioned above, all boilers have one 2 1/2-in. and two 1/2-in. tappings on top of front section.

A 3/4-in. tapping for thermostat is provided on the face of front section.

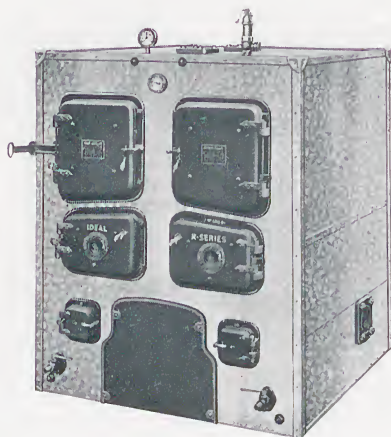
A 1 1/2-in. tapping for damper regulator is provided on top of back section, either right- or left-hand side.

For batteries of two or more boilers of the same size a single jacket can be supplied; distance from centre to centre of boilers, 62 3/8 ins.



# IDEAL No. 6 "R" SERIES BOILERS

For Oil Fuel and Mechanical Stokers



For Oil Burning.

No.		Heating Surface  Sq. ft.	Rating B.T.U. per hour	PRICES					
For Oil Burning	For Stokers			Boiler only less grate bars			Insulating Galv. Steel Jacket *		
				£	s.	d.	£	s.	d.
6-RO-7	6-RS-7	255	1,128,000	151	18	0	12	0	0
6-RO-8	6-RS-8	292	1,292,000	173	16	6	13	15	6
6-RO-9	6-RS-9	329	1,456,000	195	15	0	15	11	0
6-RO-10	6-RS-10	366	1,620,000	217	13	6	17	6	6
6-RO-11	6-RS-11	403	1,784,000	239	12	0	19	2	0
6-RO-12	6-RS-12	440	1,948,000	261	10	6	20	17	6
6-RO-13	6-RS-13	477	2,112,000	283	9	0	22	13	0
6-RO-14	6-RS-14	514	2,276,000	305	7	6	24	8	6
6-RO-15	6-RS-15	551	2,440,000	327	6	0	26	4	0

\* Jacket and doors can be supplied in vitreous enamel finish, prices on application.



For Mechanical Stoking.

Jacket can be fitted after pipe connections have been made.

When ordering Jacket, state position of flow and return tappings.

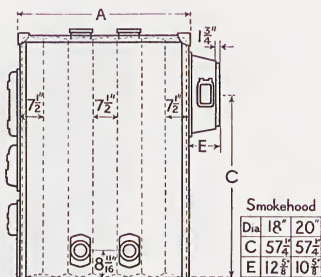
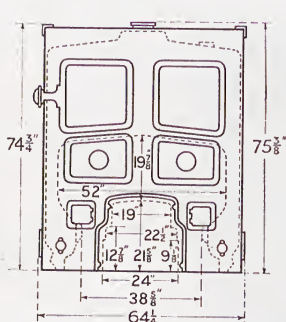
For details of tappings, etc., see page 139.

For further information regarding Mechanical Stoker requirements, see pages 76 and 77.



# IDEAL No. 6 "R" SERIES BOILERS

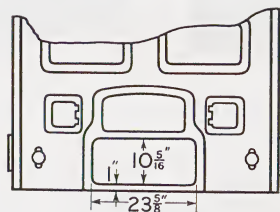
For Oil Fuel and Mechanical Stokers



For Oil Burning.

Outside Diameter of Smoke Outlet: 7 to 11 sections, 18 ins. ; 12 to 15 sections, 20 ins.

No.		Firebox		Length of Boiler A Ins.	Available Combustion Chamber Cu. ft.	Burner Capacity lb. oil per hour
For Oil Burning	For Stokers	Width Ins.	Length Ins.			
6-RO-7	6-RS-7	52	46	53 1/2	35.7	79
6-RO-8	6-RS-8	52	53	61	41.1	90
6-RO-9	6-RS-9	52	61	68 1/2	47.3	102
6-RO-10	6-RS-10	52	68	76	52.6	113
6-RO-11	6-RS-11	52	76	83 1/2	58.9	125
6-RO-12	6-RS-12	52	83	91	64.3	136
6-RO-13	6-RS-13	52	91	98 1/2	70.5	148
6-RO-14	6-RS-14	52	98	106	76.0	159
6-RO-15	6-RS-15	52	106	113 1/2	82.0	171



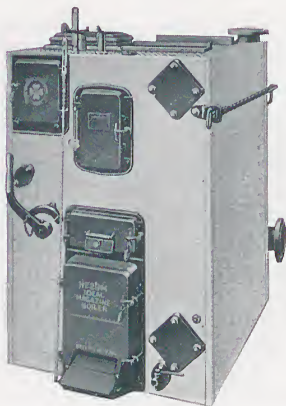
For Mechanical Stoking.

For other dimensions, see diagram above.

# IDEAL No. 2 MAGAZINE BOILERS

For Water and Steam

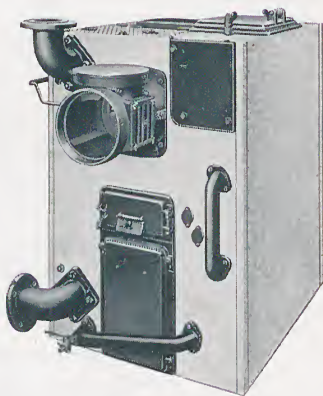
Brit. Patent No. 392402



Front view.



Open view (left-hand magazine).



Back view.

Grate Bars : Water-cooled.

Fuel Magazine : Specify whether right- or left-hand required.

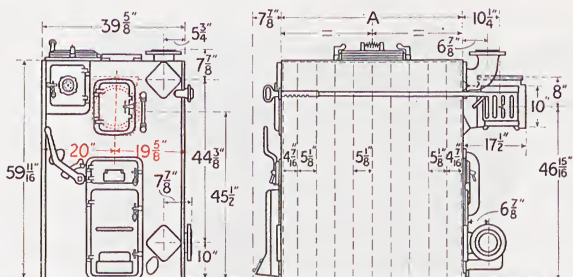
On special order, boilers of 8 sections and over can have the top charging door arranged for operation from the front instead of from side.

These boilers are regularly supplied with flanged elbow connections ; flanged stools (6 ins. face to face) for straight connections, or threaded counterflanges can be supplied in lieu thereof if specially ordered.

All boilers have one  $1\frac{1}{2}$ -in. and two  $\frac{1}{2}$ -in. tapplings on top of front section. Similar tapplings can be provided on top of back section.

# IDEAL No. 2 MAGAZINE BOILERS

For Water and Steam



Water No.	Steam No.	Water Capacity. Gallons		Heating Surface Sq. ft.	Ratings : B.T.U. per hour		
		Water Boiler	Steam Boiler		(a) Anthracite or Coke Beans $\frac{3}{8}'' \times \frac{5}{8}''$	(b) Anthracite or Coke $\frac{1}{2}'' \times 1\frac{1}{4}''$	(c)* Coke $1\frac{1}{4}'' \times 3''$
25-M	250-M	35.5	26.7	59.2	148,000	177,600	177,600
26-M	260-M	42.3	31.3	72.7	181,750	218,100	218,100
27-M	270-M	49.1	35.9	86.2	215,500	258,600	258,600
28-M	280-M	55.9	40.5	99.7	249,250	299,100	299,100
29-M	290-M	62.7	45.1	113.2	283,000	339,600	339,600
210-M	2100-M	69.5	49.7	126.7	316,750	380,100	380,100
211-M	2110-M	76.3	54.3	140.2	350,500	420,600	420,600

Water No.	Steam No.	Num- ber of Sec- tions	Fuel Capa- city Cu. ft.	Length of Boiler A † Ins.	Connec- tions Flow and Return Ins.	PRICES					
						Boiler including Jacket ‡			Stoking Tools		
						£	s.	d.	£	s.	d.
25-M	250-M	5	6.4	24 $\frac{5}{8}$	1-5	65	5	0	1	6	3
26-M	260-M	6	8.0	29 $\frac{3}{4}$	1-5	73	19	3	1	6	3
27-M	270-M	7	9.6	34 $\frac{7}{8}$	1-5	82	13	6	1	6	3
28-M	280-M	8	11.2	40	1-5	91	7	9	1	9	9
29-M	290-M	9	12.8	45 $\frac{1}{8}$	1-5	100	2	0	1	9	9
210-M	2100-M	10	14.4	50 $\frac{1}{4}$	1-5	108	16	3	1	9	9
211-M	2110-M	11	16.0	55 $\frac{3}{8}$	1-5	117	10	6	1	15	3

\* When ratings for Coke  $1\frac{1}{4}$ -in.  $\times$  3-in. are used, "C" type water-cooled grate with larger air space must be specified on order.

† Dimensioned drawing of Foundation and Ashpit on application.

‡ Insulating Galvanised Steel. Jacket and doors can be supplied in vitreous enamel finish; prices on application.

Draught at smokehood outlet should not exceed 0.2 in. w.g.

No. 802 Ideal Damper Regulator for Water Boilers (see page 175), £1 4s. 6d.

Thermostatic Damper Control (see pages 172 and 173).

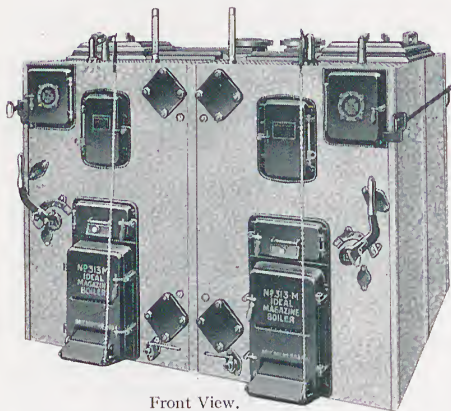
Draw-off Cocks  $\frac{3}{4}$ -in. (see page 177), each 4s. 11d.

Steam Mountings (page 176), 250 to 270-M, £7 3s. 4d.; 280 to 2110-M, £7 9s. 10d.

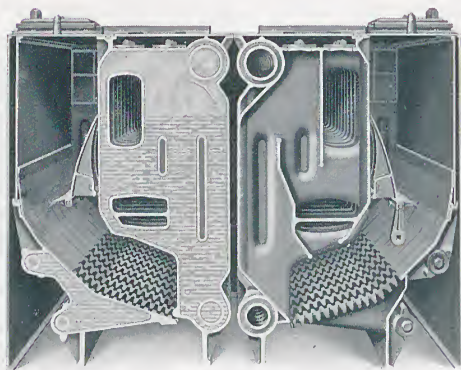
Stoking Tools (page 159), Draw-off Cocks (2) for water boilers, and mountings for steam boilers, supplied unless otherwise ordered.

# IDEAL No. 3 MAGAZINE BOILERS

## For Water and Steam



Front View.



Interior View.

Grate Bars : Water-cooled.

**No. 802 Ideal Damper Regulator for Water Boilers** (see page 175), £1 4s. 6d.  
**Thermostatic Damper Control** (see pages 172 and 173).

**Draw-off Cocks**,  $\frac{3}{4}$ -in. (see page 177), each 4s. 11d.

**Steam Mountings** (p. 176), 350 to 370-M, £14 6s. 8d. ; 380 to 3130-M, £14 19s. 8d.

As the No. 3 Series Boilers are made up of two No. 2 Series Boilers, two sets of mountings for water boilers will be required. Stoking Tools (page 159), Draw-off Cocks for water boilers, and mountings for steam boilers, supplied unless otherwise ordered.

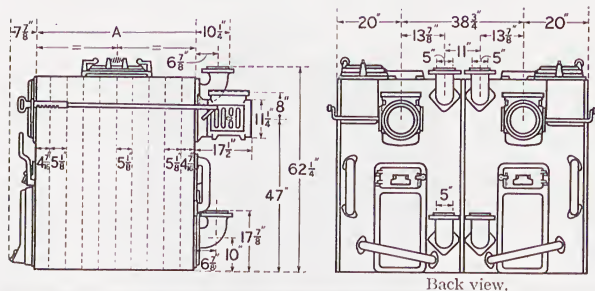
On special order, boilers of 8 sections and over can have the top charging door arranged for operation from the front instead of from side.

These boilers are regularly supplied with flanged elbow connections ; flanged stools (6 ins. face to face) for straight connections, or threaded counterflanges can be supplied in lieu thereof if specially ordered.

All boilers have one  $1\frac{1}{2}$ -in. and two  $\frac{1}{2}$ -in. tappings on top of front section. Similar tappings can be supplied on top of back section.

# IDEAL No. 3 MAGAZINE BOILERS

## For Water and Steam



Water No.	Steam No.	Water Capacity, Gallons		Heating Surface Sq. ft.	Ratings B.T.U. per hour		
		Water Boiler	Steam Boiler		(a) Anthracite or Coke Beans $\frac{3}{8}$ " $\times$ $\frac{5}{8}$ "	(b) Anthracite or Coke $\frac{1}{2}$ " $\times$ $1\frac{1}{4}$ "	(c)* Coke $1\frac{1}{4}$ " $\times$ 3"
35-M	350-M	70.0	53.4	118.4	296,000	355,200	355,200
36-M	360-M	84.6	62.6	145.4	363,500	436,200	436,200
37-M	370-M	98.2	71.8	172.4	431,000	517,200	517,200
38-M	380-M	111.8	81.0	199.4	498,500	598,200	598,200
39-M	390-M	125.4	90.2	226.4	566,000	679,200	679,200
310-M	3100-M	139.0	99.4	253.4	633,500	760,200	760,200
311-M	3110-M	152.6	108.6	280.4	701,000	841,200	841,200
312-M	3120-M	166.2	117.8	307.4	768,500	922,200	922,200
313-M	3130-M	179.8	127.0	334.4	836,000	1,003,200	1,003,200

Water No.	Steam No.	Num- ber of Sec- tions	Fuel Capa- city Cu. ft.	Length of Boiler A † Ins.	Connec- tions, Flow and Return Ins.	PRICES					
						Boiler including Jacket‡			Stoking Tools		
						£	s.	d.	£	s.	d.
35-M	350-M	5	12.8	24 $\frac{5}{8}$	2-5	123	3	6	1	6	3
36-M	360-M	6	16.0	29 $\frac{3}{4}$	2-5	140	0	6	1	6	3
37-M	370-M	7	19.2	34 $\frac{7}{8}$	2-5	156	17	6	1	6	3
38-M	380-M	8	22.4	40	2-5	173	14	6	1	9	9
39-M	390-M	9	25.6	45 $\frac{1}{8}$	2-5	190	11	6	1	9	9
310-M	3100-M	10	28.8	50 $\frac{1}{4}$	2-5	207	8	6	1	9	9
311-M	3110-M	11	32.0	55 $\frac{3}{8}$	2-5	224	5	6	1	15	3
312-M	3120-M	12	35.2	60 $\frac{1}{2}$	2-5	241	2	6	1	15	3
313-M	3130-M	13	38.4	65 $\frac{5}{8}$	2-5	257	19	6	1	15	3

\* When ratings for Coke  $1\frac{1}{4}$ -in.  $\times$  3-in. are used, "C" type water-cooled grate with larger air space must be specified on order.

† Dimensioned drawing of Foundation and Ashpit on application.

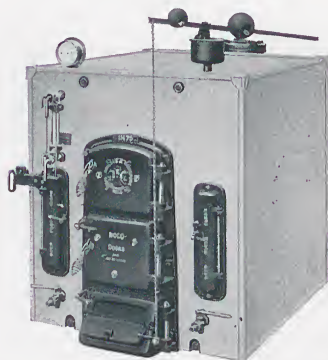
‡ Insulating Galvanised Steel. Jacket and doors can be supplied in vitreous enamel finish; prices on application.

Draught at smokehood outlet should not exceed 0.2 in. w.g.



# IDEAL No. 1 "H" SERIES BOILERS

For Water and Steam



## Water

No.	Water Capacity Gals.	Ratings			PRICES					
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler, includ- ing Jacket*			Stoking Tools		
					£	s.	d.	£	s.	d.
1-HN-4	22	108,000	750	580	34	15	0	1	1	0
1-HN-5	27	151,000	1,050	815	40	15	0	1	1	0
1-HN-6	33	194,000	1,350	1,050	46	15	0	1	3	3
1-HN-7	38	237,000	1,650	1,285	52	15	0	1	3	3
1-HN-8	44	280,000	1,950	1,520	58	15	0	1	4	3

## Steam

No.	Water Capacity	Ratings		PRICES								
		B.T.U. per hour	Direct Radiation Sq. ft.	Boiler, includ- ing Jacket*			Mountings			Stoking Tools		
	£			s.	d.	£	s.	d.	£	s.	d.	
1-HN-40	14	108,000	420	34	15	0	7	1	6	1	1	0
1-HN-50	17	151,000	590	40	15	0	7	1	6	1	1	0
1-HN-60	20	194,000	760	46	15	0	7	1	6	1	3	3
1-HN-70	23	237,000	930	52	15	0	7	1	6	1	3	3
1-HN-80	26	280,000	1,100	58	15	0	7	1	6	1	4	3

\* Insulating Galvanised Steel. Jacket and doors can be supplied in vitreous enamel finish ; prices on application.

Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for enlarging

Boilers, including Jacket extension pieces . . each £6 1s. 6d.

No. 802 Ideal Regulator for Water Boilers (see p. 175) 1 4 6

Draw-off Cocks,  $\frac{3}{4}$ -in. (see page 177) . . . . each 4 11

Grate Bars : Water-cooled. Grill pattern can be supplied.

Stoking Tools : Supplied unless otherwise ordered (see page 159).

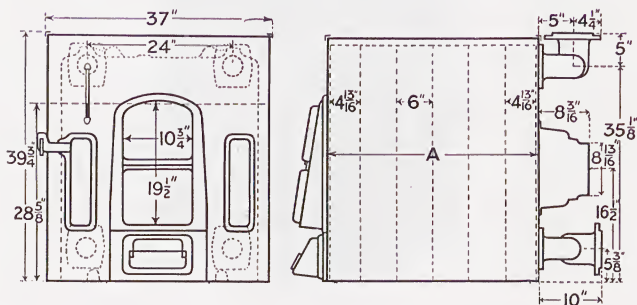
Draw-off Cocks (two) : Forwarded with water boilers unless otherwise ordered.

Steam Mountings : Forwarded with boilers unless otherwise ordered (see page 176).



# IDEAL No. 1 "H" SERIES BOILERS

For Water and Steam



Water	Steam	Number of Sections	Heating Surface	Fuel Capa- city	Length of Boiler A † Ins.	Connections	
						Flow	Return
No.	No.			Sq. ft.	*Cu. ft.		Number and Diam. in inches
1-HN-4	1-HN-40	4	37.50	3.3	21 <sup>5</sup> / <sub>8</sub>	1-4	1-4
1-HN-5	1-HN-50	5	48.25	4.6	27 <sup>5</sup> / <sub>8</sub>	1-4	1-4
1-HN-6	1-HN-60	6	59.00	5.9	33 <sup>5</sup> / <sub>8</sub>	1-4	1-4
1-HN-7	1-HN-70	7	69.75	7.2	39 <sup>5</sup> / <sub>8</sub>	1-4	1-4
1-HN-8	1-HN-80	8	80.50	8.5	45 <sup>5</sup> / <sub>8</sub>	1-4	1-4

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

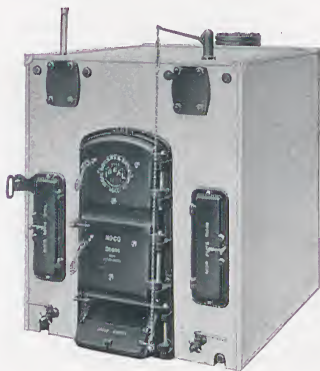
The sections being made in halves, the flow and return openings on one half of boiler must be connected with the corresponding flow and return openings on the other half. Special headers are supplied with boilers for this purpose, giving one or two back flow or return connections (see pages 162 and 163).

Counterflanges and other boiler fittings charged extra, as page 164.

In addition to the openings mentioned above, all water boilers have one 1½-in. and one ½-in. tapping on top of front section. One 1¼-in. tapping is also provided in flow header (pages 162 and 163).

# IDEAL No. 2 "H" SERIES BOILERS

## For Water and Steam



**Water**

No.	Water Capacity Gals.	Ratings			PRICES					
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler, includ- ing Jacket*			Stoking Tools		
					£	s.	d.	£	s.	d.
2-HN-6	51·7	293,000	2,000	1,580	67	14	6	1	3	3
2-HN-7	59·2	348,000	2,400	1,880	76	17	0	1	3	3
2-HN-8	67·8	403,000	2,800	2,180	85	19	6	1	4	3
2-HN-9	76·3	458,000	3,200	2,480	95	2	0	1	10	6
2-HN-10	84·9	513,000	3,600	2,780	104	4	6	1	16	3
2-HN-11	93·5	568,000	4,000	3,080	113	7	0	1	16	3

**Steam**

No.	Water Capacity Gals.	Ratings		PRICES								
		B.T.U. per hour	Direct Radiation Sq. ft.	Boiler, includ- ing Jacket*			Mountings			Stoking Tools		
				£	s.	d.	£	s.	d.	£	s.	d.
2-HN-60	32·2	293,000	1,145	67	14	6	7	8	9	1	3	3
2-HN-70	37·2	348,000	1,360	76	17	0	7	8	9	1	3	3
2-HN-80	42·3	403,000	1,575	85	19	6	7	8	9	1	4	3
2-HN-90	47·3	458,000	1,790	95	2	0	7	8	9	1	10	6
2-HN-100	52·4	513,000	2,005	104	4	6	7	8	9	1	16	3
2-HN-110	58·5	568,000	2,220	113	7	0	7	8	9	1	16	3

\* Insulating Galvanised Steel. Jacket and doors can be supplied in vitreous enamel finish ; prices on application.

Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for enlarging Boilers, including Jacket extension pieces . . . . . each £9 4s. 0d.

**No. 802 Ideal Regulator for Water Boilers** (see p. 175) 1 4 6

**Draw-off Cocks, ½-in.** (see page 177) . . . . . each 4 11

Grate Bars : Water cooled. Grill pattern can be supplied.

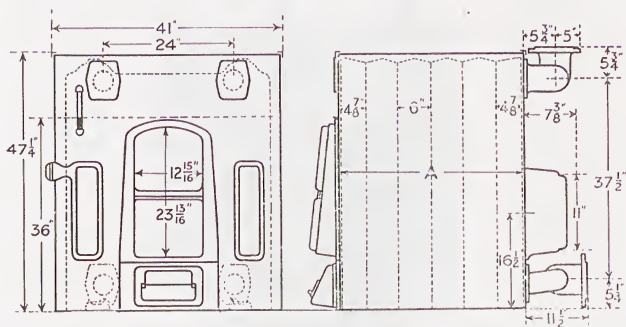
Stoking Tools : Supplied unless otherwise ordered (see page 159).

Draw-off Cocks (two) : Forwarded with water boilers unless otherwise ordered.

Steam Mountings : Forwarded with boilers unless otherwise ordered (see page 176).

# IDEAL No. 2 "H" SERIES BOILERS

For Water and Steam



Water	Steam	Number of Sections	Heating Surface Sq. ft.	Fuel Capacity *Cu. ft.	Length of Boiler A † Ins.	Connections	
						Flow	Return
No.	No.					Number and Diam. in inches	
2-HN-6	2-HN-60	6	79.5	7.5	33 3/4	1-5	1-5
2-HN-7	2-HN-70	7	94.5	9.0	39 3/4	1-5	1-5
2-HN-8	2-HN-80	8	109.5	10.5	45 3/4	1-5	1-5
2-HN-9	2-HN-90	9	124.5	12.0	51 3/4	1-5	1-5
2-HN-10	2-HN-100	10	139.5	13.5	57 3/4	1-5	1-5
2-HN-11	2-HN-110	11	154.5	15.0	63 3/4	1-5	1-5

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

The sections being made in halves, the flow and return openings on one half of boiler must be connected with the corresponding flow and return openings on the other half. Special headers are supplied with boilers for this purpose, giving one or two back flow or return connections (see pages 162 and 163). On special order, the flow header connections can be arranged at front of boiler, instead of at back as regularly supplied.

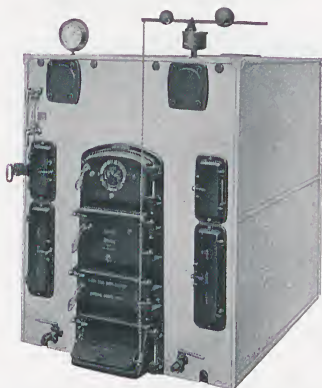
Counterflanges and other boiler fittings charged extra, as page 164.

In addition to the openings mentioned above, all water boilers have one 1 1/2-in. and one 1/2-in. tapping on top of front section. One 1 1/2-in. tapping is also provided in flow header (pages 162 and 163).

When two or more boilers of the same size are ordered at one time and for the same destination, a single jacket for the battery of boilers is supplied unless otherwise specified. Distance from centre to centre of boilers, 40 ins.

# IDEAL No. 3 "H" SERIES BOILERS

For Water and Steam



Water

No.	Water Capacity Gals.	Ratings			PRICES					
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler, includ- ing Jacket*			Stoking Tools		
					£	s.	d.	£	s.	d.
3-HN-8	109.0	629,000	4,370	3,400	131	2	9	1	10	6
3-HN-9	122.4	710,400	4,935	3,840	144	12	9	1	10	6
3-HN-10	135.8	791,800	5,500	4,280	158	2	9	1	16	3
3-HN-11	149.2	873,200	6,065	4,720	171	12	9	1	16	3
3-HN-12	162.6	954,600	6,630	5,160	185	2	9	1	16	3

Steam

No.	Water Capacity Gals.	Ratings		PRICES						
		B.T.U. per hour	Direct Radiation Sq. ft.	Boiler, includ- ing Jacket*			Mountings			Stoking Tools
				£	s.	d.	£	s.	d.	£ s. d.
3-HN-80	66.8	629,000	2,455	131	2	9	9	2	3	1 10 6
3-HN-90	74.8	710,400	2,775	144	12	9	9	2	3	1 10 6
3-HN-100	82.8	791,800	3,095	158	2	9	9	2	3	1 16 3
3-HN-110	90.8	873,200	3,415	171	12	9	9	2	3	1 16 3
3-HN-120	98.8	954,600	3,735	185	2	9	9	2	3	1 16 3

\* Insulating Galvanised Steel. Jacket and doors can be supplied in vitreous enamel finish ; prices on application.

Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for enlarging Boilers,  
including Jacket extension pieces .. .. . each £13 12s. 0d.

No. 802 Ideal Regulator for Water Boilers (see p.175) 1 4 6

Draw-off Cocks, 1-in. (see page 177) .. .. . each 7 6

Grate Bars : Water cooled. Grill pattern can be supplied.

Stoking Tools : Supplied unless otherwise ordered (see page 159).

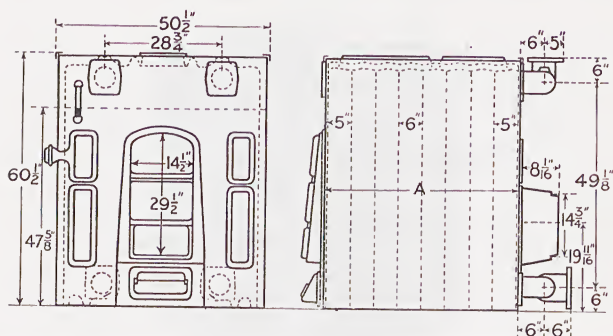
Draw-off Cocks (two) : Forwarded with water boilers unless otherwise ordered.

Steam Mountings : Forwarded with boilers unless otherwise ordered (see page 176).

Top Fire Door : Supplied only on special order.

# IDEAL No. 3 "H" SERIES BOILERS

For Water and Steam



Water	Steam	Number of Sections	Heating Surface	Fuel Capa- city	Length of Boiler  A ↑ Ins.	Connections	
						Flow	Return
No.	No.			Sq. ft.	*Cu. ft.		Number and Diam. in inches
3-HN-8	3-HN-80	8	170	18.0	46	1-6	1-6
3-HN-9	3-HN-90	9	192	20.5	52	1-6	1-6
3-HN-10	3-HN-100	10	214	23.0	58	1-6§	1-6
3-HN-11	3-HN-110	11	236	25.5	64	1-6§	1-6
3-HN-12	3-HN-120	12	258	28.0	70	1-6§	1-6

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

The sections being made in halves, the flow and return openings on one half of boiler must be connected with the corresponding flow and return openings on the other half. Special headers are supplied with boilers for this purpose (see pages 162 and 163). On special order, the flow header connections can be arranged at front of boiler, instead of at back as regularly supplied.

§ For Steam Boilers larger than 9 sections, two 6-in. steam outlets are recommended; therefore front and back sections are each provided with necessary openings and header.

Counterflanges and other boiler fittings charged extra, as page 164.

In addition to the openings mentioned above, all water boilers have one 1½-in. and one ½-in. tapping on top of front section. One 2-in. tapping is also provided in flow header (pages 162 and 163).

Special openings fitted with covers are provided on top of the boilers, giving ready access for cleaning between the sections.

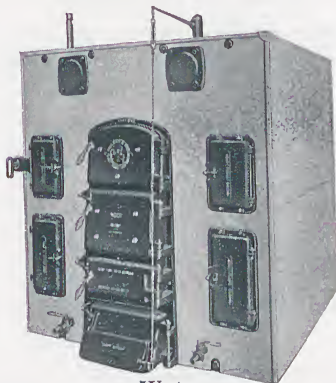
On special order, these boilers can be prepared for operation with underground flues.

When two or more boilers of the same size are ordered at one time and for the same destination, a single jacket for the battery of boilers is supplied unless otherwise specified. Distance from centre to centre of boilers, 49½ ins.



# IDEAL No. 4 "H" SERIES BOILERS

For Water and Steam



Water

No.	Water Capacity Gals.	Ratings			PRICES					
		B.T.U. per hour	Direct Radiation Sq. ft.	Lineal feet of 4-in. Pipe	Boiler, includ- ing Jacket*			Stoking Tools		
					£	s.	d.	£	s.	d.
4-HN-8	153.5	870,000	6,000	4,700	168	12	6	1	10	6
4-HN-9	171.1	989,000	6,825	5,345	187	12	0	1	10	6
4-HN-10	188.6	1,108,000	7,650	5,990	206	11	6	1	16	3
4-HN-11	206.2	1,227,000	8,475	6,635	225	11	0	1	16	3
4-HN-12	223.7	1,346,000	9,300	7,280	244	10	6	1	16	3
4-HN-13	241.3	1,465,000	10,125	7,925	263	10	0	1	17	9
4-HN-14	258.9	1,584,000	10,950	8,570	282	9	6	1	17	9

Steam

No.	Water Capacity Gals.	Ratings			PRICES					
		B.T.U. per hour	Direct Radiation Sq. ft.	Boiler, includ- ing Jacket*	Mountings			Stoking Tools		
				£	s.	d.	£	s.	d.	£
4-HN-80	96.5	870,000	3,395	168	12	6	9	2	0	1
4-HN-90	107.6	989,000	3,860	187	12	0	9	2	0	1
4-HN-100	118.6	1,108,000	4,325	206	11	6	9	2	0	1
4-HN-110	129.7	1,227,000	4,790	225	11	0	9	2	0	1
4-HN-120	140.7	1,346,000	5,255	244	10	6	9	2	0	1
4-HN-130	151.8	1,465,000	5,720	263	10	0	9	2	0	1
4-HN-140	162.9	1,584,000	6,185	282	9	6	9	2	0	1

\* Insulating Galvanised Steel. Jacket and doors can be supplied in vitreous enamel finish; prices on application.

Jacket can be fitted after pipe connections have been made.

Extra Middle Sections, with necessary nipples for enlarging Boilers, including Jacket extension pieces .. .. . each £19 2s. 0d.

No. 802 Ideal Regulator for Water Boilers (see p. 175) 1 4 6.

Draw-off Cocks, 1-in. (see page 177) .. .. . each 7 6

Grate Bars : Water cooled. Grill pattern can be supplied.

Stoking Tools : Supplied unless otherwise ordered (see page 159).

Draw-off Cocks (two) : Forwarded with water boilers unless otherwise ordered.

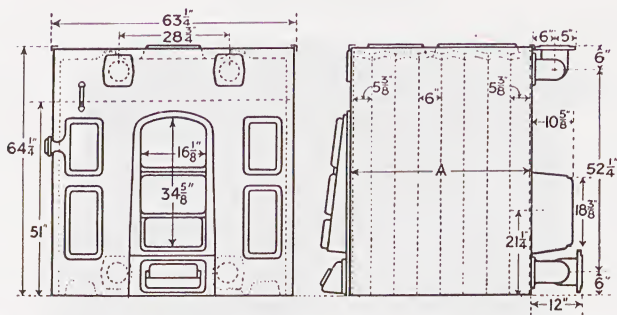
Steam Mountings : Forwarded with boilers unless otherwise ordered (see page 176).

Top Fire Door : Supplied only on special order.



# IDEAL No. 4 "H" SERIES BOILERS

## For Water and Steam



Water No.	Steam No.	Number of Sections	Heating Surface	Fuel Capa- city	Length of Boiler A † Ins.	Connections	
						Flow	Return
			Sq. ft.	*Cu. ft.		Number and Diam. in inches	
4-HN-8	4-HN-80	8	240	22	46 3/4	1-6	1-6
4-HN-9	4-HN-90	9	272	25	52 3/4	1-6	1-6
4-HN-10	4-HN-100	10	304	28	58 3/4	1-6	1-6
4-HN-11	4-HN-110	11	336	31	64 3/4	1-6§	1-6
4-HN-12	4-HN-120	12	368	34	70 3/4	1-6§	1-6
4-HN-13	4-HN-130	13	400	37	76 3/4	1-6§	1-6
4-HN-14	4-HN-140	14	432	40	82 3/4	1-6§	1-6

\* Available for fuel under working conditions.

† For Foundation and Ashpit Dimensions, see pages 74 and 75.

The sections being made in halves, the flow and return openings on one half of boiler must be connected with the corresponding flow and return openings on the other half. Special headers are supplied with boilers for this purpose (see pages 162 and 163). On special order, the flow header connections can be arranged at front of boiler, instead of at back as regularly supplied.

§ For Steam Boilers larger than 10 sections, two 6-in. steam outlets are recommended; therefore front and back sections are each provided with necessary openings and header.

Counterflanges and other boiler fittings charged extra, as page 164.

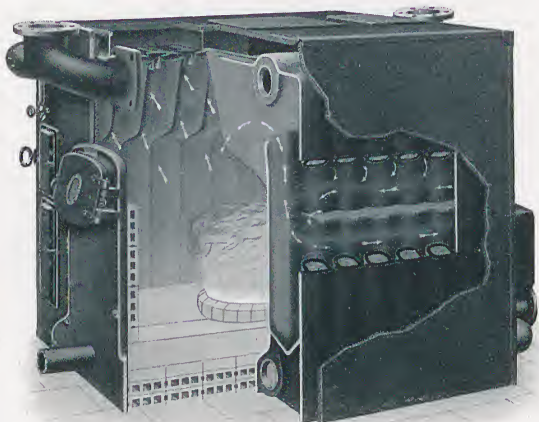
In addition to the openings mentioned above, all water boilers have one 1½-in. and one ½-in. tapping on top of front section. One 2-in. tapping is also provided in flow header (pp. 162 and 163).

Special openings fitted with covers are provided on top of the boilers, giving ready access for cleaning between the sections.

On special order, boilers can be prepared for operation with underground flues.

When two or more boilers of the same size are ordered at one time and for the same destination, a single jacket for the battery of boilers is supplied unless otherwise specified; distance from centre to centre of boilers, 62 ¼ ins.

## IDEAL "H" SERIES BOILERS FOR OIL FUEL



The Ideal "H" Series Boilers, both for water and steam, also give very satisfactory results with Oil Fuel.

The illustration shows an "H" Series Boiler adapted for this purpose with firebrick lining suitable for a rotary burner. The sections are cast without the water-cooled grate, and in place of the usual clinker and ashpit door solid plates are provided, which will be drilled free of charge to suit the nozzle of burner if template or sketch accompanies the order. If required, a sliding ashpit door can be supplied.

Observation door is fitted with small Pyrex glass window. Locking device for fixing smokepipe damper in smokehood in any position can also be supplied.

Under oil-firing conditions it is advantageous with most burners to use a long boiler of one series rather than a short boiler of a larger series. The boilers for oil-firing are listed longer than those for solid fuel.

Boilers not exceeding the length of those regularly listed for solid fuel on pages 146 to 153, can readily be converted for burning solid fuel by inserting grill grate bars and fixing new front section and platework, less flue doors and frames. Longer boilers could of course be similarly converted, but hand-firing would be impracticable.

**When ordering Boilers for Oil Burning, quote the distinguishing Catalogue Fig. No. (see page 155).**

# IDEAL "H" SERIES BOILERS

## FOR OIL FUEL

### Capacities and Prices

No.		Heating Surface  Sq. ft.	Rating B.T.U. per hour †	PRICES					
Water	Steam			*Boiler, including Jacket (less grate bars)	Steam Mountings				
				£	s.	d.	£	s.	d.
1-HO-4	1-HO-40	37.5	108,000 – 130,000	34	3	0	7	1	6
5	50	48.25	151,000 – 181,000	40	0	0	7	1	6
6	60	59.0	194,000 – 232,000	45	17	0	7	1	6
7	70	69.75	237,000 – 283,000	51	14	0	7	1	6
8	80	80.5	280,000 – 334,000	57	11	0	7	1	6
9	90	91.25	323,000 – 385,000	63	8	0	7	1	6
10	100	102.0	366,000 – 436,000	69	5	0	7	1	6
11	110	112.75	409,000 – 487,000	75	2	0	7	1	6
2-HO-6	2-HO-60	79.5	293,000 – 351,000	66	10	6	7	8	9
7	70	94.5	348,000 – 417,000	75	9	0	7	8	9
8	80	109.5	403,000 – 483,000	84	7	6	7	8	9
9	90	124.5	458,000 – 549,000	93	6	0	7	8	9
10	100	139.5	513,000 – 615,000	102	4	6	7	8	9
11	110	154.5	568,000 – 681,000	111	3	0	7	8	9
12	120	169.5	623,000 – 747,000	120	1	6	7	8	9
13	130	184.5	678,000 – 813,000	129	0	0	7	8	9
3-HO-8	3-HO-80	170.0	629,000 – 755,000	129	2	9	9	2	3
9	90	192.0	710,400 – 852,000	142	7	9	9	2	3
10	100	214.0	791,800 – 949,000	155	12	9	9	2	3
11	110	236.0	873,200 – 1,046,000	168	17	9	9	2	3
12	120	258.0	954,600 – 1,143,000	182	2	9	9	2	3
13	130	280.0	1,036,000 – 1,240,000	195	7	9	9	2	3
14	140	302.0	1,117,400 – 1,337,000	208	12	9	9	2	3
15	150	324.0	1,198,800 – 1,434,000	221	17	9	9	2	3
4-HO-8	4-HO-80	240.0	870,000 – 1,050,000	164	12	6	9	2	3
9	90	272.0	989,000 – 1,192,000	183	2	0	9	2	3
10	100	304.0	1,108,000 – 1,334,000	201	11	6	9	2	3
11	110	336.0	1,227,000 – 1,476,000	220	1	0	9	2	3
12	120	368.0	1,346,000 – 1,618,000	238	10	6	9	2	3
13	130	400.0	1,465,000 – 1,760,000	257	0	0	9	2	3
14	140	432.0	1,584,000 – 1,902,000	275	9	6	9	2	3
15	150	464.0	1,703,000 – 2,044,000	293	19	0	9	2	3
16	160	496.0	1,822,000 – 2,186,000	312	8	6	9	2	3
17	170	528.0	1,941,000 – 2,328,000	330	18	0	9	2	3

\* Insulating Galvanised Steel. Jacket and doors can be supplied in vitreous enamel finish; prices on application.

Jacket can be fitted after pipe connections have been made.

† A maximum rating is given in order that the full advantage of oil firing may be obtained at will, the size of combustion chamber being adequate for the higher rating. **The lower rating should always be used for steam boilers.**

Draw-off Cocks: each,  $\frac{3}{4}$ -in., 4s. 11d.; 1-in., 7s. 6d.

Draw-off Cocks (two  $\frac{3}{4}$ -in. with Nos. 1 and 2 Series, and two 1-in. with Nos. 3 and 4 Series) sent with water boilers unless otherwise ordered (see page 177).

Steam Mountings sent with steam boilers unless otherwise ordered (see page 176).

# IDEAL "H" SERIES BOILERS

## FOR OIL FUEL

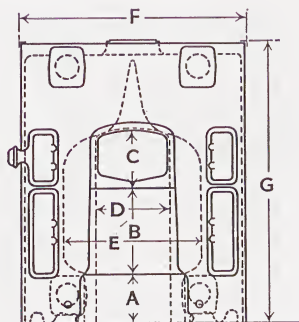
No.		Inside Firebox Dimensions at Grate Level		Available Combustion Chamber	Burner Capacity	*Number of Sections to be baffled at rear of boiler
Water	Steam	Width Ins.	Length Ins.	Cu. ft.	Lb. Oil per hour	
1-HO-4	1-HO-40	20	17	4.0	7.6	—
5	50	20	23	5.4	10.6	—
6	60	20	29	6.8	13.6	—
7	70	20	35	8.2	16.6	—
8	80	20	41	9.6	19.6	—
9	90	20	47	11.0	22.6	—
10	100	20	53	12.4	25.6	—
11	110	20	59	13.8	28.6	—
2-HO-6	2-HO-60	24	29	10.0	20.6	2†
7	70	24	35	11.9	24.4	2†
8	80	24	41	13.8	28.2	3†
9	90	24	47	15.7	32.1	4†
10	100	24	53	17.6	35.9	5†
11	110	24	59	19.5	39.8	5†
12	120	24	65	21.4	43.6	6†
13	130	24	71	23.3	47.4	6†
3-HO-8	3-HO-80	30	41	22.0	44.0	4
9	90	30	47	25.2	49.7	5
10	100	30	53	28.4	55.4	6
11	110	30	59	31.6	61.1	6
12	120	30	65	34.8	66.8	7
13	130	30	71	38.0	72.5	7
14	140	30	77	41.2	78.2	8
15	150	30	83	44.4	83.9	8
4-HO-8	4-HO-80	32	41	26.2	60.9	3†
9	90	32	47	30.0	69.2	4†
10	100	32	53	33.8	77.6	5†
11	110	32	59	37.6	85.9	5†
12	120	32	65	41.4	94.2	6†
13	130	32	71	45.2	102.5	6†
14	140	32	77	49.0	110.8	7†
15	150	32	83	52.8	119.1	8†
16	160	32	89	56.6	127.4	9†
17	170	32	95	60.4	135.7	9†

\* Baffles placed in side flues, starting from back section.

† Excluding back section, which is cast with baffle.

# IDEAL "H" SERIES BOILERS

## FOR OIL FUEL



Dimensions in Inches (see also page 158)

No.		Flow and Return Connections	A	B	C	D	E	F	G
Water	Steam								
1-HO-4 to 1-HO-11	1-HO-40 to 1-HO-110	1-4	7 $\frac{11}{16}$	10 $\frac{3}{4}$	10 $\frac{7}{16}$	12	20	37	39 $\frac{1}{4}$
2-HO-6 to 2-HO-13	2-HO-60 to 2-HO-130	1-5	8 $\frac{7}{8}$	13 $\frac{7}{8}$	11 $\frac{3}{4}$	14 $\frac{1}{16}$	24	41	47 $\frac{1}{4}$
3-HO-8 to 3-HO-15	3-HO-80 to 3-HO-150	1-6*	9 $\frac{1}{2}$	19 $\frac{15}{16}$	12	16	30	50 $\frac{1}{2}$	60 $\frac{1}{2}$
4-HO-8 to 4-HO-17	4-HO-80 to 4-HO-170	1-6*	9 $\frac{15}{32}$	22 $\frac{1}{2}$	14	18	32	63 $\frac{1}{4}$	64 $\frac{1}{4}$

**Connections.**—The sections being made in halves, the flow and return openings on one half of the boiler must be connected with the corresponding flow and return openings of the other half. Special headers are supplied with boilers for this purpose, giving one or two back flow and return connections (see pages 162 and 163). In the case of Nos. 2, 3 and 4 Series, the flow header connections can be arranged at front of boiler to special order.

**\* Note.**—STEAM BOILERS.—When larger than 9 sections in the No. 3 Series, and 10 sections in the No. 4 Series, two 6-in. steam outlets are recommended; therefore front and back sections are each provided with necessary openings and header.

**WATER BOILERS.**—When larger than 12 sections in the No. 4 Series, two 6-in. flow outlets are provided by means of headers on front and back sections.

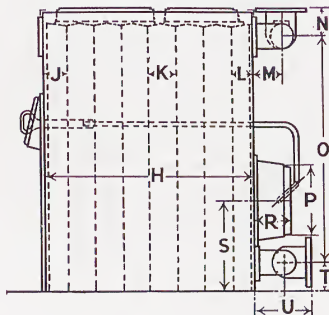
**Batteries of Boilers.**—When two or more boilers of the same size are ordered at one time, and for the same destination, a single jacket for the battery of boilers is supplied unless otherwise specified. Distance from centre to centre of boilers: No. 2 Series, 40 ins.; No. 3 Series, 49  $\frac{1}{2}$  ins.; No. 4 Series, 62  $\frac{1}{4}$  ins.

**Underground Flues.**—On special order the Nos. 3 and 4 Series Boilers can be prepared for operation with underground flues.

Loose grill grate bars can be supplied if required to convert for burning solid fuel.

# IDEAL "H" SERIES BOILERS

## FOR OIL FUEL



Dimensions in Inches (see also page 157)

No.		H	J	K	L	M	N	O	P	R	S	T	U
Water	Steam												
1-HO-4	1-HO-40	21 $\frac{5}{8}$	4 $\frac{13}{16}$	6	4 $\frac{13}{16}$	5	5	29 $\frac{3}{4}$	8 $\frac{13}{16}$	8 $\frac{3}{16}$	16 $\frac{1}{2}$	5 $\frac{3}{8}$	10
5	50	27 $\frac{5}{8}$											
6	60	33 $\frac{5}{8}$											
7	70	39 $\frac{5}{8}$											
8	80	45 $\frac{5}{8}$											
9	90	51 $\frac{5}{8}$											
10	100	57 $\frac{5}{8}$											
11	110	63 $\frac{5}{8}$	4 $\frac{7}{8}$	6	4 $\frac{7}{8}$	5 $\frac{1}{4}$	5 $\frac{1}{4}$	37 $\frac{1}{2}$	11	7 $\frac{3}{8}$	16 $\frac{1}{2}$	5 $\frac{1}{4}$	11 $\frac{1}{2}$
2-HO-6	2-HO-60	33 $\frac{3}{4}$											
7	70	39 $\frac{3}{4}$											
8	80	45 $\frac{3}{4}$											
9	90	51 $\frac{3}{4}$											
10	100	57 $\frac{3}{4}$											
11	110	63 $\frac{3}{4}$											
12	120	69 $\frac{3}{4}$	5	6	5	6	6	49 $\frac{1}{8}$	14 $\frac{3}{4}$	8 $\frac{1}{16}$	19 $\frac{11}{16}$	6	12
13	130	75 $\frac{3}{4}$											
3-HO-8	3-HO-80	46											
9	90	52											
10	100	58											
11	110	64											
12	120	70											
13	130	76	5 $\frac{3}{8}$	6	5 $\frac{3}{8}$	6	6	52 $\frac{1}{4}$	18 $\frac{3}{8}$	10 $\frac{3}{8}$	21 $\frac{1}{4}$	6	12
14	140	82											
15	150	88											
4-HO-8	4-HO-80	46 $\frac{3}{4}$											
9	90	52 $\frac{3}{4}$											
10	100	58 $\frac{3}{4}$											
11	110	64 $\frac{3}{4}$											
12	120	70 $\frac{3}{4}$											
13	130	76 $\frac{3}{4}$											
14	140	82 $\frac{3}{4}$											
15	150	88 $\frac{3}{4}$											
16	160	94 $\frac{3}{4}$											
17	170	100 $\frac{3}{4}$											



## STOKING TOOLS

The table below shows the composition of sets of Stoking Tools regularly supplied with Boilers and charged at the prices shown.

For Boilers Nos.	Domestic 0-DA, 00 s. d.	Domestic 0-02A, 1-2A, 4D- 6D, HW20 s. d.	14D 15D s. d.	NC 31-51 s. d.	NC 61-71 42-52 s. d.	NC 62-92 s. d.	HW 3-4 s. d.	HW 5-6 s. d.
Shovel ..	10	1 1	4 8	1 11	1 11	4 8	6 9	6 9
Poker (bent)	—	8	1 5	1 0	1 3	1 6	—	—
Slice Bar ..	7	8	1 3	1 0	1 3	1 5	2 3	3 9
Flue Brush	—	—	—	2 6	2 6	2 6	—	—
Scraper ..	—	—	—	1 1	1 3	1 6	2 4	2 3
Clinker Tool	—	1 7	2 8	1 7	1 7	2 8	2 8	5 0
Complete Set	1 5	4 0	10 0	9 1	9 9	14 3	14 0	17 9

For Boilers Nos.	HW7-8 s. d.	03-05K HW30- 50 s. d.	06-07K HW60 s. d.	14-15K 24-25K s. d.	16-17K 26-27K s. d.	35-36K s. d.	18K 28-29K s. d.	37-38K s. d.
Shovel ..	6 9	4 8	4 8	6 9	6 9	9 0	6 9	9 0
Slice Bar ..	5 0	2 3	3 3	1 8	2 10	2 7	4 6	4 6
Flue Brush	—	—	—	3 6	3 11	3 9	4 3	4 0
Scraper ..	3 0	1 10	2 5	2 2	2 8	2 2	3 6	3 6
Clinker Tool	5 0	2 8	2 8	5 0	5 0	5 0	5 0	5 0
Complete Set	19 9	11 5	13 0	19 1	21 2	22 6	24 0	26 0

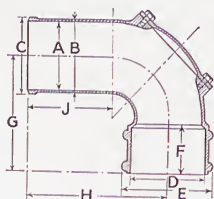
For Boilers Nos.	47-48K 6R7-8 s. d.	39-310K s. d.	49-410K 6R9-10 s. d.	311K 411-414K 6R11-12 s. d.	25-27M 35-37M s. d.	28-210M 38-310M s. d.	211M 311- 313M s. d.
Shovel ..	9 0	9 0	9 0	9 0	6 9	6 9	6 9
Slice Bar ..	5 0	6 6	6 6	6 6	2 6	3 9	5 0
Flue Brush	4 9	5 9	6 6	7 0	3 9	4 3	5 9
Scraper ..	4 3	5 0	5 9	6 0	2 6	3 0	4 6
Clinker Tool	5 0	5 0	5 0	5 0	5 0	5 0	5 0
Flue Scraper	—	—	—	—	2 3	3 6	4 9
Flex. Handle Flue Brush	—	—	—	—	3 6	3 6	3 6
Complete Set	28 0	31 3	32 9	33 6	26 3	29 9	35 3

For Boilers Nos.	1HN4-5 s. d.	1HN6-7 2HN6-7 s. d.	1HN8 2HN8 s. d.	2HN9 3HN8-9 4HN8-9 s. d.	2HN10-11 3HN10-12 4HN10-12 s. d.	4HN13 4HN14 s. d.	6R13-15 s. d.
Shovel ..	6 9	6 9	6 9	9 0	9 0	9 0	9 0
Slice Bar ..	1 6	2 6	2 9	4 0	5 9	6 6	8 0
Flue Brush ..	3 9	4 0	4 3	5 0	6 3	6 3	8 6
Scraper ..	2 0	2 6	2 9	3 9	5 3	5 8	8 0
Clinker Tool..	5 0	5 0	5 0	5 0	5 0	5 0	5 0
Flue Scraper	2 0	2 6	2 9	3 9	5 0	5 3	—
Flex. Handle Flue Brush	—	—	—	—	—	—	—
Complete Set	21 0	23 3	24 3	30 6	36 3	37 9	38 6

Flue Brush Heads only :

5 × 5 × 2, for Nos. 1K & 2K Brit., "H" & Magazine Boilers each 2s. 6d.  
 5 × 5 × 5, " 3 " 4 " " " " " 3s. 0d.  
 Rack for Set of Stoking Tools .. .. " " " " " " 8s. 6d.

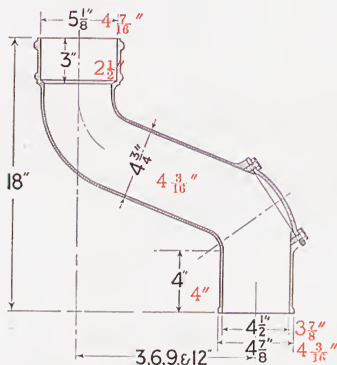
## CAST IRON SMOKEPIPE AND ELBOWS



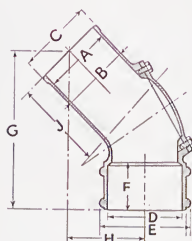
90° Elbow.



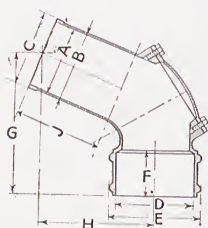
Smokepipe with or without cleanout and check-draught. 4-in., 4½-in. and 6-in. plain smokepipe can be supplied with spigot both ends.



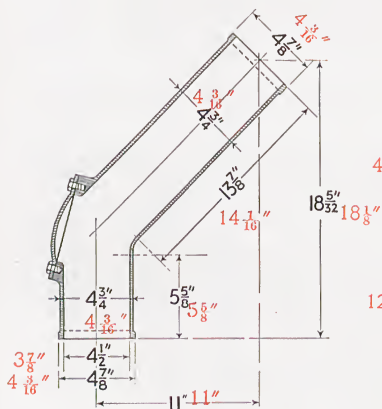
4-in. and 4½-in. Offsets. Can be supplied with spigot both ends.



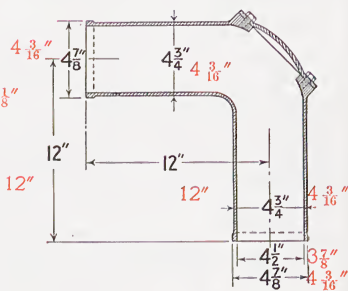
135° Elbow.



112½° Elbow.



4-in. and 4½-in. 135° Elbows with  
spigot ends, one end extended.



4-in. and 4½-in. 90° Elbows with  
spigot ends.

Dimensions of 4-in. size are printed in red.

## CAST IRON SMOKEPIPE AND ELBOWS

Dimensions in Inches

Size	A	4	4½	6	8	10	12	14
Smokepipe and Elbows	B	4 $\frac{3}{16}$	4 $\frac{13}{16}$	6 $\frac{5}{16}$	8 $\frac{3}{8}$	10 $\frac{7}{16}$	12 $\frac{1}{2}$	14 $\frac{11}{16}$
	C	—	4 $\frac{7}{8}$	6 $\frac{7}{16}$	8 $\frac{1}{2}$	10 $\frac{11}{16}$	12 $\frac{3}{4}$	14 $\frac{15}{16}$
	D	4 $\frac{7}{16}$	5 $\frac{1}{8}$	6 $\frac{3}{4}$	8 $\frac{15}{16}$	11 $\frac{1}{4}$	13 $\frac{5}{16}$	15 $\frac{9}{16}$
	E	5 $\frac{1}{16}$	5 $\frac{3}{4}$	7 $\frac{7}{16}$	10	12 $\frac{1}{2}$	14 $\frac{11}{16}$	17
	F	2 $\frac{1}{2}$	2 $\frac{1}{2}$	3	4	4 $\frac{1}{4}$	4 $\frac{1}{4}$	4 $\frac{1}{4}$
Elbows, 90°	G	6 $\frac{5}{8}$	7 $\frac{3}{8}$	8 $\frac{29}{32}$	10 $\frac{27}{32}$	12 $\frac{17}{32}$	13 $\frac{11}{16}$	14 $\frac{7}{8}$
	H	9	9 $\frac{1}{2}$	11	13	15	17	18 $\frac{1}{8}$
Elbows, 112½°	J	5 $\frac{3}{8}$	5 $\frac{5}{8}$	6 $\frac{7}{8}$	6 $\frac{29}{32}$	7 $\frac{19}{32}$	8 $\frac{7}{16}$	8 $\frac{3}{8}$
	G	8 $\frac{13}{32}$	9 $\frac{1}{4}$	10 $\frac{15}{16}$	—	—	—	—
	H	7 $\frac{7}{32}$	7 $\frac{9}{16}$	8 $\frac{11}{16}$	—	—	—	—
Elbows, 135°	J	5 $\frac{3}{8}$	5 $\frac{5}{8}$	6 $\frac{7}{8}$	—	—	—	—
	G	9 $\frac{3}{8}$	10 $\frac{3}{16}$	11 $\frac{29}{32}$	13 $\frac{31}{32}$	15 $\frac{23}{32}$	17 $\frac{5}{32}$	17 $\frac{15}{16}$
	H	4 $\frac{7}{8}$	5 $\frac{1}{8}$	5 $\frac{25}{32}$	6 $\frac{21}{32}$	7 $\frac{1}{2}$	8 $\frac{15}{32}$	8 $\frac{25}{32}$
	J	5 $\frac{3}{8}$	5 $\frac{5}{8}$	6 $\frac{7}{8}$	6 $\frac{29}{32}$	7 $\frac{19}{32}$	8 $\frac{7}{16}$	8 $\frac{3}{8}$

## Prices

Size	..	..	..	ins.	4		4½		6		8		10		12		14	
					s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Pipe 6-ft. lengths	..	..	..	per yard	4	5	4	8	7	1	11	1	20	6	27	4	46	11
Vitreous enamelled	..	..	..	..	9	8	12	7	19	0	—	—	—	—	—	—	—	—
Pipe 2-ft., 3-ft., 4-ft. lengths	..	..	..	..	4	7	5	0	7	5	12	0	22	7	29	8	55	4
Vitreous enamelled	..	..	..	..	10	8	12	11	19	3	—	—	—	—	—	—	—	—
Pipe with combination cleanout and checkdraught in 3-ft. lengths	..	..	..	..	7	5	7	11	11	2	—	—	—	—	—	—	—	—
Vitreous enamelled	..	..	..	..	14	8	17	9	25	4	—	—	—	—	—	—	—	—
Ditto, in 4-ft. lengths	..	..	..	..	9	0	9	6	13	8	—	—	—	—	—	—	—	—
Vitreous enamelled	..	..	..	..	17	10	22	1	31	9	—	—	—	—	—	—	—	—
*Elbows, square (90°)	} with soot	..	..	..	4	10	5	8	8	5	11	8	25	9	36	3	56	6
„ obtuse (135°)																		
Vitreous enamelled	..	..	..	..	9	6	10	6	15	11	—	—	—	—	—	—	—	—
Elbows, obtuse (112½°) with soot door	..	..	..	..	4	10	5	8	8	5	13	2	—	—	—	—	—	—
Vitreous enamelled	..	..	..	..	9	6	10	6	15	11	—	—	—	—	—	—	—	—
Cowls	..	..	..	each	4	10	5	8	9	1	11	3	15	1	19	5	—	—

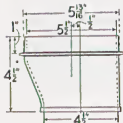
4½-in. and 6-in. Smokepipe can be supplied with plain ends instead of socket at the same prices.

Vitreous Enamel Finishes : Grey, Green or Blue Mottle, or Black.

	4-in.	4½-in.	4-in.	4½-in.
Offsets, 3-in. projection	4s. 2d.	4s. 6d.	Vitreous enamelled	8s. 5d.
„ 6-in. „	5s. 1d.	5s. 8d.	„ „	10s. 4d.
„ 9-in. „	5s. 10d.	6s. 6d.	„ „	11s. 8d.
„ 12-in. „	6s. 11d.	7s. 2d.	„ „	13s. 9d.

\* Square Elbows (90°), with soot door and two spigot ends 12 ins. from faec to centre of spigots, 4-in., 7s. 1d.; 4½-in., 7s. 7d. Vitreous enamelled, 4-in., 12s. 6d.; 4½-in., 13s. 5d.

Obtuse Elbows (135°), with soot door and two spigot ends, one end lengthened 8½ ins., 4-in., 7s. 1d.; 4½-in., 7s. 7d. Vitreous enamelled, 4-in., 12s. 6d.; 4½-in., 13s. 5d.



Adapter.

4½-in. × 6-in. Adapter, for making 6-in. flue connection 2s. 1d. Vitreous enamelled, 3s. 9d. State for which type of boiler required.

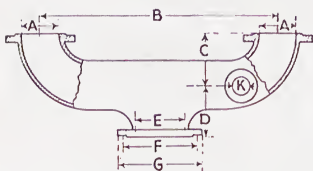
Cast iron Collar for making tight joint where smokepipe passes through blanking-off plate : 4-in., 1s. 8d.; 4½-in., 1s. 11d.; 6-in., 2s. 1d. Vitreous enamelled : 4-in., 2s. 5d.; 4½-in., 2s. 7d.; 6-in., 3s. 3d.



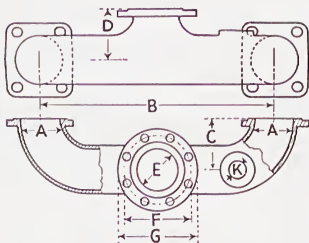
Collar.

# FLOW AND RETURN HEADERS

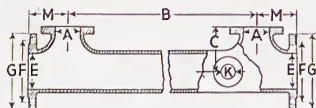
## For Ideal Britannia and "H" Series Boilers



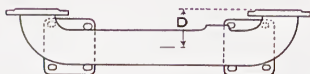
Nos. 100, 122, 150, 152



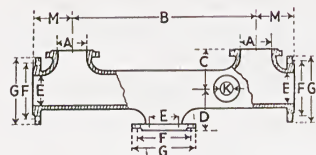
Nos. 102, 126, 154, 156  
202, 212, 222.



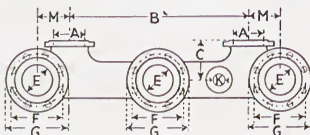
Nos. 104, 128, 158  
204, 214, 224



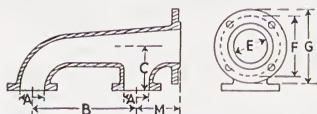
Nos. 106 and 160



No. 162



No. 164



Nos. 182, 184, 186, 188

For dimensions see page 163.

## FLOW AND RETURN HEADERS

### For Ideal Britannia and "H" Series Boilers

#### Dimensions

No.	Boiler Series	Type	Dimensions in inches								
			A	B	C	D	E	F	G	K*	M
100	1 "H"	Back Flow or Return	3	24	5	5	4	7	8½	1¼	—
102	"	Back Flow				5					—
104	"	Back Flow or Return				—					5½
106	"	Back Flow				5					5½
122	2 "H"	Flow or Return	4	24	5¾	5¾	5	8¼	10	1½	—
126	"	Flow				5¾	5	8¼	10		—
128	"	Flow or Return				—	4	7	8½		5¾
150	3 & 4 "H"	Flow or Return	5	28¾	6	6	5	8¼	10	2½	—
152	"	"				6	6	9¼	11		—
154	"	Flow				6	5	8¼	10		—
156	"	"				6	6	9¼	11		—
158	"	Flow or Return				—	5	8¼	10		6
160	"	Flow				6	5	8¼	10		5
162	"	Flow or Return				6	5	8¼	10		6
164	"	Flow				6	5	8¼	10		5
182†	3 Brit.	Flow or Return	4	14	6	—	6	9¼	11	—	6
184†	3 "	"				—	5	8¼	10	—	
186†	4 "	"	5	14	6	—	5	8¼	10	—	
188†	4 "	"				—	6	9¼	11	—	
202	4 "	Back Return, for Oil	4	43	7	5	6	9¼	11	—	—
204	4 "	" " "		43	6	—	5	8¼	10	—	5½
212	3 "	" " "		33	7	5	6	9¼	11	—	—
214	3 "	" " "		33	6	—	5	8¼	10	—	5½
222	2 "	" " "	3	24½	5	5	4	7	8½	—	—
224	2 "	" " "				—	4	7	8½	—	5½

\* Tapping for Safety Valve.

† PRICES : Nos. 182 and 186, 45s. 11d. ; Nos. 184 and 188, 50s. 3d.

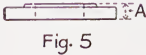
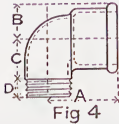
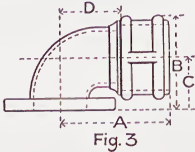
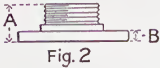
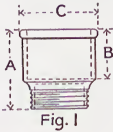
## BOILER WRENCHES

For assembling Ideal Sectional Boilers



PRICE each, No. 9 for all Sectional Boilers, 7s. 9d.

BOILER FITTINGS AND CONNECTIONS



Dimensions in Inches

Fig.	2-in.				3-in.				4-in.				5-in.		
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
1	5 $\frac{1}{4}$	2 $\frac{3}{4}$	4 $\frac{1}{2}$	—	6	3	5 $\frac{5}{8}$	—	6 $\frac{1}{2}$	4	6 $\frac{5}{8}$	—	7	4 $\frac{3}{8}$	7 $\frac{5}{8}$
2	2 $\frac{5}{8}$	—	—	—	2 $\frac{7}{8}$	—	—	—	3 $\frac{1}{8}$	1	—	—	3 $\frac{3}{8}$	1	—
3	6	5	2 $\frac{7}{8}$	3 $\frac{3}{8}$	7 $\frac{1}{4}$	6 $\frac{1}{4}$	3 $\frac{5}{8}$	4	8 $\frac{3}{8}$	7 $\frac{1}{4}$	4	4 $\frac{7}{8}$	—	—	—
4	4 $\frac{3}{4}$	2 $\frac{1}{4}$	2 $\frac{3}{4}$	1 $\frac{1}{2}$	5 $\frac{5}{8}$	2 $\frac{5}{8}$	3 $\frac{3}{8}$	1 $\frac{5}{8}$	6 $\frac{3}{4}$	3 $\frac{1}{4}$	3 $\frac{7}{8}$	1 $\frac{5}{8}$	—	—	—
5	1	—	—	—	1 $\frac{1}{8}$	—	—	—	1 $\frac{1}{4}$	—	—	—	1 $\frac{3}{8}$	—	—
6	3 $\frac{3}{4}$	—	—	—	4 $\frac{1}{4}$	—	—	—	4 $\frac{1}{2}$	1	—	—	—	—	—

Fig.	6-in.		3 × 2-in.				3 × 2 $\frac{1}{2}$ -in.			4 × 2 $\frac{1}{2}$ -in.			4 × 3-in.			
	A	B	A	B	C	D	A	B	C	A	B	C	A	B	C	D
1	—	—	6 $\frac{1}{4}$	3 $\frac{3}{8}$	5 $\frac{3}{4}$	—	5 $\frac{5}{8}$	3	5 $\frac{3}{4}$	5 $\frac{3}{4}$	3 $\frac{7}{8}$	6 $\frac{5}{8}$	6 $\frac{1}{2}$	4	6 $\frac{7}{8}$	—
4	—	—	5 $\frac{1}{4}$	2 $\frac{5}{8}$	3	1 $\frac{1}{2}$	—	—	—	—	—	—	6 $\frac{5}{16}$	3 $\frac{3}{16}$	3 $\frac{3}{4}$	1 $\frac{5}{8}$
5	1 $\frac{1}{2}$	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

All flanges are British Standard (Table No. 1).

Prices

Fig.	Description	2-in.	3-in.	4-in.	5-in.	6-in.
1	*Threaded Socket ..	2/6	4/3	5/-	7/10	—
2	Threaded Flange ..	2/6	4/3	6/7	9/6	—
3	Flanged Elbow Socket	6/9	10/1	15/9	—	—
4	*Threaded Elbow Socket	4/1	6/7	10/8	—	—
5	Flange only .. ..	2/4	4/1	5/3	9/-	11/3
6	Flanged Socket ..	3/9	5/3	10/8	—	19/8

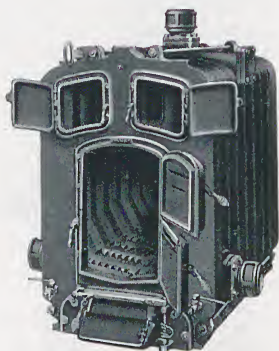
\* Reducing Fittings as listed above, charged at the price of the larger size.  
† For No. 4 Series Britannia Boilers.

Flange, 7 $\frac{1}{4}$ ins. diameter, tapped 2 ins., with 2-in. Close Taper Nipple .. ..	4/9
Flange, 8 $\frac{1}{2}$ ins. diameter, tapped 3 ins., with 3-in. Close Taper Nipple .. ..	8/-
Bolts ( $\frac{5}{8}$ -in.) for Flanges .. .. each	-/4



# FLANGED SOCKET CONNECTIONS

For Direct Fixing



Britannia Boiler with shoulder flow, and return connections on each side.



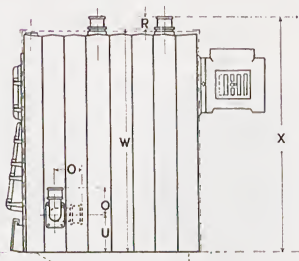
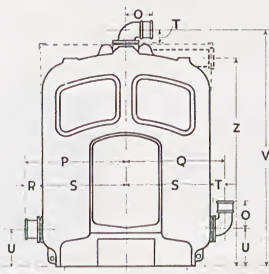
No. 6B—Flow or Return.



No. 3B.—Flow or Vertical Return.



No. 3BL.—Flow or Horizontal Return.



Supplied only in 4-in. and 5-in. sizes.

If supplied in place of regular tapped flanges, Nos. 3B and 3BL Elbow Sockets are charged extra each : 4-in., 3s. 9d. ; 5-in., 7s. 2d., but no extra charge is made for No. 6B Straight Sockets.

When ordered separately, price each : No. 6B—4-in., 7s. 2d. ; 5-in., 10s. 8d. ; Nos. 3B and 3BL—4-in., 10s. 8d. ; 5-in., 14s. 1d.

Britan- nia Boiler Series	Size	Dimensions in inches.										
		Ins.	O	P	Q	R	S*	T	U	V	W*	X
2-K	4	8 $\frac{5}{8}$	22 $\frac{5}{16}$	20 $\frac{9}{16}$	6	16 $\frac{5}{16}$	4 $\frac{1}{4}$	9 $\frac{11}{16}$	53 $\frac{1}{4}$	49	55	45 $\frac{1}{8}$
3-K	4	8 $\frac{5}{8}$	27	24 $\frac{1}{2}$	6	21	3 $\frac{1}{2}$	10 $\frac{15}{16}$	61 $\frac{5}{16}$	57 $\frac{13}{16}$	63 $\frac{13}{16}$	52 $\frac{11}{16}$
3-K	5	9	27	25 $\frac{1}{4}$	6	21	4 $\frac{1}{4}$	10 $\frac{15}{16}$	62 $\frac{1}{16}$	57 $\frac{13}{16}$	63 $\frac{13}{16}$	52 $\frac{11}{16}$
4-K	4	8 $\frac{5}{8}$	30 $\frac{1}{2}$	29 $\frac{3}{4}$	4 $\frac{1}{4}$	26 $\frac{1}{4}$	3 $\frac{1}{2}$	11 $\frac{1}{2}$	70 $\frac{3}{8}$	66 $\frac{7}{8}$	71 $\frac{1}{8}$	61 $\frac{3}{4}$
4-K	5	9	32 $\frac{1}{4}$	30 $\frac{1}{2}$	6	26 $\frac{1}{4}$	4 $\frac{1}{4}$	11 $\frac{1}{2}$	71 $\frac{1}{8}$	66 $\frac{7}{8}$	72 $\frac{7}{8}$	61 $\frac{3}{4}$

\* Including  $\frac{1}{8}$  in. for Gasket.

# IDEAL PLASTIC COMPOUNDS

## For covering Boilers, Tanks and Pipes

These compounds can be applied to either warm or cold surfaces, although a warm surface is preferable. First put on a thin spotting coat ; after this is well set and nearly all moisture evaporated, apply a second rough coat, finishing off with a third coat trowelled down smooth.

**Ideal Plastic Asbestos**, covering capacity approximately 32 sq. ft., one inch thick per 100 lb. 100-lb. bag, 14s. 0d. ; 50-lb. bag, 8s. 0d. ; 25 lb. bag, 4s. 9d.

**85% Magnesia Plastic Covering**, supplied in 56-lb. bags at 28s. 6d. per bag. Covering capacity approximately 60 sq. ft., one inch thick per 56 lb.

## IDEAL PLASTIC SMOKEPIPE COVERING

A heat-resisting composition for insulating Flue Pipes.  
Supplied in 1-cwt. bags .. .. per cwt. 38s. 9d.

## IDEAL BOILER CEMENT

For rendering boilers, smokepipe, etc., smoketight.  
PRICE : 5-lb. can, 1s. 9d. ; 2-lb. can, 1s. 0d.

## IDEAL SECTIONAL PIPE COVERINGS



85% Magnesia.

Both these coverings are canvas backed, and are complete with metal fixing bands. Supplied in sections, 85% Magnesia 3 ft. long ; Air Cell 2 ft. long.



Air Cell.

### 85% Magnesia Covering

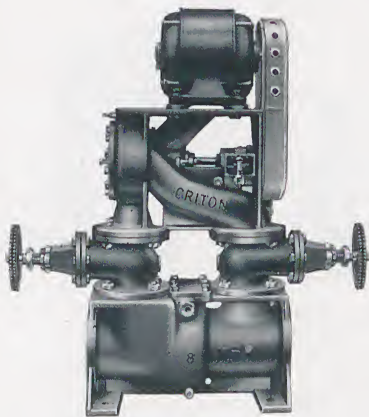
$\frac{1}{2}$ -in. to 3-in.,  $\frac{3}{4}$ " thick ; 4-in. to 6 in., 1" thick.

W.I. Pipe Sizes, ins.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4	5	6
For Pipes per lineal ft.	—	-/9	-/9 $\frac{1}{2}$	-/10 $\frac{1}{2}$	1/-	$1/0\frac{1}{2}$	$1/2$	$1/4\frac{1}{2}$	$1/6\frac{1}{2}$	$2/8$	$3/1$	$3/5$
„ Bends .. each	—	$1/1\frac{1}{2}$	$1/2$	$1/4$	$1/6$	$1/6\frac{1}{2}$	$1/9$	$2/0\frac{1}{2}$	$2/3\frac{1}{2}$	4/-	$4/7$	$5/2$
„ Tees & Elbows „	—	$1/4$	$1/4\frac{1}{2}$	$1/6\frac{1}{2}$	$1/9$	$1/10$	$2/0\frac{1}{2}$	$2/5$	$2/8\frac{1}{2}$	$4/8$	$5/4$	6/-
„ Crosses .. „	—	$1/6$	$1/7$	$1/9$	2/-	$2/1$	$2/4$	$2/9$	$3/1$	$5/4$	$6/1$	$6/10$

### Air Cell Covering. 1-in. thick.

For Pipes per lineal ft.	-/9	-/9	-/10	-/11	1/-	$1/0\frac{1}{2}$	$1/2\frac{1}{2}$	$1/4$	$1/6$	$1/9$	2/-	$2/3$
„ Tees, Elbows,												
Crosses & Bends .. each	$1/9$	$1/11$	$2/1$	$2/3$	$2/5$	$2/7$	$2/11$	$3/7$	4/-	$4/11$	6/-	$7/1$

## CRITON ACCELERATORS



The " Criton " is a new and improved accelerator embodying the following distinctive features :

The pump unit is very quiet in operation. The " V " belt drive and resilient rubber mountings under the motor practically eliminate any motor hum being transmitted to the system.

Oil ring lubricated main bearing.

Stainless steel impeller shaft of special design.

Easy change over to and from full bore gravity flow.

Positive isolation of pump.

No separate by-pass pipe, isolation valves or non-return valve required.

No mal-alignment trouble.

Economy in first cost and floor space.

The " Criton " is as easy to install as a length of piping.

*Descriptive Pamphlet sent on request.*

## ESTIMATES

When applying for Estimates the following particulars should be furnished :

- (1) Rate of circulation desired in gallons per minute.
- (2) Frictional (NOT STATIC) head in feet when flow is as above.
- (3) Particulars of electrical supply (which should be verified with the Supply Company before ordering) :
  - (a) (if A.C.) state voltage, whether 1, 2 or 3 phases, and periodicity.
  - (b) (if D.C.) state voltage.
- (4) Any special requirements as to motors or switchgear.
- (5) Any preference for special make of motor.
- (6) Whether Silent Commercial Motor (for factory, warehouse, emporium, etc.) or Super Silent Motor (for church, hospital, school, private house, etc.) is required.
- (7) If rate of circulation and frictional head cannot be given, state B.T.U. or Total Heating Surface in sq. ft.
- (8) **IMPORTANT.**—The Valves are fitted as illustrated unless otherwise ordered. If required on right- or left-hand side when facing delivery end of set, specify on order.
- (9) Any other comments.

## IDEAL THERMOMETERS



No. 1 Straight.  
No. 2 Angle.



No. 3A Straight.  
No. 7 Angle.



No. 4A Angle (L.H.).  
R. or L. Hand.



No. 3 Straight.  
No. 4 Angle.



The sockets of these Thermometers are screwed  $\frac{1}{2}$ -in. gas thread. Before fixing, remove Thermometer from the socket.

No.	Type	Pattern	PRICE	
			Fahr. or Cent.	s. d.
1	Iron Case	Straight	5	7
2	" "	Angle	6	6
*3	Brass Case	Straight	9	3
*3A	" "	"	8	4
*3	" "	" with revolving shield	13	4
4	" "	Angle	14	10
4A	" "	Angle R. or L.H.	12	5
7	" "	Angle	12	5

\* State size of boiler. Special  $\frac{3}{4}$ -in. sockets supplied for Nos. 3 and 4 Series Britannia Boilers.

Iron Mercury Well for Nos. 3-4A, screwed  $\frac{3}{4}$ -in. gas.. 3s. 5d.

Scale and tube portion for No. 3 .. .. 4s. 11d.

" " No. 3A .. .. 4s. 11d.

## IDEAL IRON CEMENT

An Iron Cement made in powder form for repairing leaks or breaks in castings and for making connections in steam or hydraulic work. It is applied to cold metal as a paste or putty, and withstands fire, water and steam. The cement when hard is subject to the same conditions of expansion and contraction as cast iron, and offers an effective resistance to very high pressures.

In 5-lb. tins. PRICE, 2s. 0d. per lb.

## IDEAL WHITE PIPE CEMENT

Makes perfectly tight joints with steam, water or gas pipes, tanks, etc., and is ready for use without mixing with other materials, or letting down with oil.

PRICE, per 1-lb. tin, 1s. 3d.

## IDEAL DIAL THERMOMETERS



Vertical.



Horizontal.

These bimetallic thermometers are of sound construction and high-class finish and appearance, the case being finished black with chromium-plated dustproof bezel and bevelled plate-glass front.

The accuracy is guaranteed. The dial is silvered, with black graduations and figures.

PRICE, Vertical, 4-in. dial, screwed $\frac{1}{2}$ -in. gas thread ..	31s. 0d.
„ „ 2 $\frac{1}{2}$ -in. „ „ $\frac{1}{2}$ -in. „ ..	14s. 3d.
„ Horizontal, 4-in. dial, screwed $\frac{3}{4}$ -in. gas thread ..	27s. 6d.
„ „ 2 $\frac{1}{2}$ -in. „ „ $\frac{3}{4}$ -in. „ ..	12s. 6d.

## ALTITUDE GAUGES



**Altitude Gauge**, regularly stocked graduated up to 70 ft. and up to 150 ft. head pressures; 70 ft. supplied unless otherwise ordered.

PRICE, screwed  $\frac{1}{4}$ -in. gas thread, each .. 10s. 6d.

Can also be supplied with metric graduation.

**Combined Altitude Gauge and Thermometer**, stocked graduated up to 70 ft. only. Can be supplied for any higher head pressure at slight extra charge.

PRICE, screwed  $\frac{1}{2}$ -in. gas thread, each .. 18s. 0d.

Can be supplied in angle pattern, price .. 27s. 6d.



# NATIONAL ENCLOSED SAFETY VALVES

For Hot Water Boilers



No.	Socket Screwed Gas Ins.	Suitable for		PRICES					
		Tank Height Ft.	Radiating Surface Sq. ft.	Valve without Padlock			Valve with Padlock		
				£	s.	d.	£	s.	d.
1	$\frac{3}{4}$	35	50 to 700	2	0	4	2	1	4
1A		50		2	0	4	2	1	4
1B		70		2	6	2	2	7	2
2	$\frac{3}{4}$	60	700 to 3,000	3	0	3	3	1	3
2A		80		3	0	3	3	1	3
2B		110		3	4	11	3	5	11
X3	1	60	3,000 to 6,000	3	15	0	5	1	0
X3A		80		3	15	0	5	1	0
X3B		110		5	8	2	5	9	2
3	1	60	6,000 to 8,000	6	3	4	6	4	5
3A		80		6	3	4	6	4	5
3B		110		6	15	6	6	16	7
X4	$1\frac{1}{4}$	60	8,000 to 11,000	8	18	9	8	19	10
X4A		80		8	18	9	8	19	10
X4B		110		10	7	11	10	9	0
4	$1\frac{1}{2}$	60	8,000 to 16,000	11	12	7	11	13	9
4A		80		11	12	7	11	13	9
4B		120		13	15	10	13	17	0

Valves will be supplied loaded for above tank heights unless otherwise ordered.

## NATIONAL ENCLOSED SPRING SAFETY VALVES



No.	Socket Screwed Gas Ins.	Suitable for B.T.U.'s.	PRICE Valve with Padlock		
			£	s.	d.
17	$\frac{1}{2}$	100,000	1	9	6
18	$\frac{3}{4}$	500,000	1	16	4
19	1	900,000	2	11	9
20	$1\frac{1}{4}$	1,300,000	2	19	6
21	$1\frac{1}{2}$	1,800,000	4	12	6
22	2	3,200,000	5	12	3

Tank height must be specified on order.



## IDEAL "A1" SPRING SAFETY VALVES



This valve is suitable for use with all hot-water heating and domestic supply boilers, also low-pressure steam heating boilers.

### Special Features

Gun-metal throughout, excepting the rustless steel spring (cadmium-plated).

Full area discharge.

Outlet well below valve seat.

Seating centralised by quadruple winged guide on spindle.

Head of spindle protected against external overloading.

Valve easily tested by rotating or lifting.

Sturdy design, good appearance and finish.

Always supplied with padlock to prevent interference.

Screwed for $\frac{3}{4}$ -in. Gas.	Ratings up to 500,000 B.T.U.	£1 13s. 9d.
" 1-in. "	500,000 to 800,000 "	1 15s. 3d.
" $1\frac{1}{4}$ -in. "	800,000 to 1,350,000 "	2 4s. 9d.
" $1\frac{1}{2}$ -in. "	1,350,000 to 1,800,000 "	2 16s. 0d.
" 2-in. "	above 1,800,000 "	3 17s. 3d.

Tank height or working steam pressure must be specified.

## SPRING SAFETY VALVES

Gun-metal, with Phosphor-bronze Spring and Rubber Seat.

PRICE, screwed  $\frac{1}{2}$ -in. or  $\frac{3}{4}$ -in. gas thread, each 3s. 9d.

Ditto, " 1-in. gas thread " 5s. 2d.

These Valves are set to blow off at 35 lb. pressure, but are adjustable down to blow off at 10 lb. pressure.



## IDEAL DEAD WEIGHT SAFETY VALVES



Size, ins.	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
Weighted to lb. pressure ..	33	33	33	33	33
PRICE .. each	11/3	12/-	21/-	22/6	25/6
Extra weight to increase resistance by 14 lb.	1/-	1/-	1/6	1/6	1/11

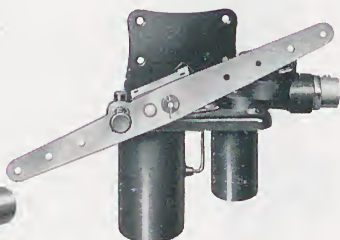
# THERMOSTATIC DAMPER CONTROL

For Ideal Magazine Boilers

For A.C. Supplies only



Thermostat.



Motor Unit.

This damper control is simple in design, of neat appearance, has no wearing parts and is noiseless in operation. It consists of a Thermostat controlling a motor operating in a 20-25 volt A.C. Supply. The motor unit is connected by chains to a draught chute fitted at the back of boiler and to the check-draught door in smoke-hood. A switch box is also provided containing fuses, tumbler switch and pilot light, which is wired so that it lights when the temperature falls and the thermostat circuit closes, and goes out when the circuit opens after the set temperature has been regained.

The motor unit consists of an electric heating element inserted in a chamber containing volatile liquid. When the Thermostat makes circuit with this element, the heat vaporises some of the liquid, thus increasing the internal pressure and forcing the liquid through a tube into the bellows chamber. Opposing the bellows is a spring which normally keeps the spindle and lever arm of the unit in such a position that the fire is checked. The pressure causes the bellows head to move against the pressure of the spring, which action rotates the spindle and rocks the lever, so opening the draught chute and closing the check-draught door. When the temperature to which it has been set is reached, the Thermostat breaks circuit and the action is reversed. In case of current failure or damage to unit, the boiler fire is automatically checked.

The control is supplied complete with necessary conduit and fittings.

**ROOM THERMOSTAT.** The controls can be made to operate in conjunction with a Room Thermostat. In this case, however, the Boiler Thermostat should always be used as a safety or temperature limiting device.

# THERMOSTATIC DAMPER CONTROL

## For Ideal Magazine Boilers

For A.C. Supplies only

**Prices** (Switch Fuse and Transformer extra, see below).

For No. 2 Series Ideal Magazine Boilers, with back flow .. .. . £16 13s. 6d.  
(Thermostat tapping in front flange.)

For No. 3 Series Boilers, as above .. .. . 33 7 0

As the No. 3 Series Boilers are made up of two No. 2 Series Boilers two sets of Controls are required.

### Prices of Transformers and Switch Fuse arranged for Conduit Connection

Switch Fuse, 5 amp.	.. .. .	6s. 6d.
Transformer (XT 5406) For 1 Motor Unit	.. .. .	£1 16 0
„ (XT 5408) „ 2 „ Units..	.. .. .	2 12 3
„ (XT 5410) „ 3-6 „ „ ..	.. .. .	3 1 6
„ (XT 5412) „ 7-12 „ „ ..	.. .. .	4 2 6

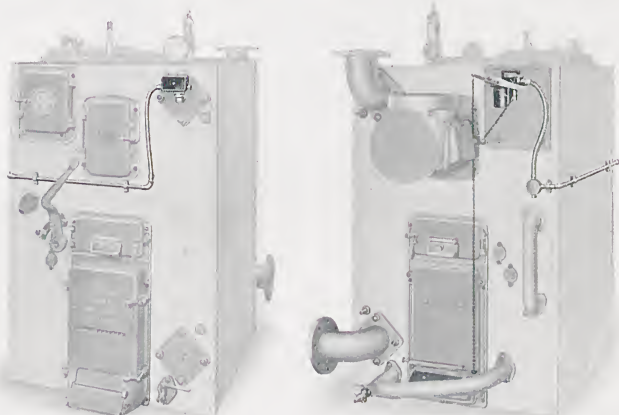
One Motor Unit is required for each single boiler.

Two Motor Units are required for each double boiler.

Transformers are suitable for stepping down voltage from 200-250 A.C. to 20-25 A.C.

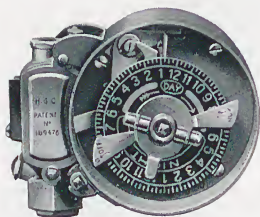
Where boiler is fitted with flow connections at front, this should be stated on order, as in such event the Thermostat must be screwed into flange on back of boiler, necessitating variation of the conduit.

For an existing boiler, a draught chute for back base panel, and a lift-up check draught to replace hit and miss damper in smokehood will be supplied. Provision must be made for fixing these, as well as for fixing motor unit to back panel of magazine and conduit to boiler. Tapping for Thermostat must also be made.



# CLOCK CONTROLS

For Ideal Gas Boiler Installations



The 15-day clockwork control, as illustrated, reduces the gas supply to boiler to the minimum (as required for the self-pilot flames), and automatically restores the full gas supply at the same predetermined hours of each and every day of the week.

*Selective Device.*—If desired, the control can be provided with this device which prevents operation on one or any number of selected days of the week. Unless ordered to the contrary, this is arranged to miss operation on Sundays only. Extra pins, for fitting in the star wheel of the control in situ, to prevent operation on other days, can be supplied.

*Advancing Device.*—When it is desired to advance or retard the normal “on” and “off” times on one or more days of the week, this further device can be incorporated. “Advanced” time is earlier and “retarded” time is later than normal. The actual times of advance or retard are adjustable. As an example, the following schedule can be carried out :

Monday .. ..	6 a.m. to 6 p.m.	Friday .. ..	6 a.m. to 6 p.m.
Tuesday .. ..	6 a.m. to 6 p.m.	Saturday .. ..	8 a.m. to 1 p.m.
Wednesday .. ..	8 a.m. to 1 p.m.	Sunday .. ..	Off
Thursday .. ..	6 a.m. to 6 p.m.		

Full details of requirements must be given when ordering, for whereas the actual times of advance or retard are adjustable in situ, any alteration in the day of advance or retard necessitates the Control being returned.

Advanced “On” times can also be provided at an extra charge.

The standard type clock control for Nos. 1 and 2-GB, and 3-GBA Series is fitted on the escape pipe between the thermostat and escape burner. If room thermostat is also used, then the clock control should be fitted on the secondary tubing between boiler thermostat and room thermostat. No by-pass is necessary.

## PRICES

Complete with 2 compression unions for 3/16-in. bore by 19-gauge copper tube, or with adapters for 3/8-in. iron pipe connection .. ..	£2 11s. 6d.
If supplied with compression unions for 1/4-in. bore by 19-gauge copper tube .. .. Extra	2 0
Selective Device for 3/16-in. size .. ..	11 0
“ “ 3/8-in. to 2-in. sizes.. ..	12 6
Selective and Advancing Devices for 3/16-in. size ..	1 2 0
If Earlier “On” Time is required .. ..	8 5
Selective and Advancing Devices for 3/8-in. to 2-in. sizes .. .. Extra	1 3 0
If it is considered preferable to fix clock control on main gas pipe, it should be fitted in a convenient position between the meter and the gas governor.	
PRICE, screwed 3/8-in. and 1-in. .. ..	5 10 0
“ “ 1 1/2-in. or 2-in. .. ..	9 10 0

## ROOM THERMOSTAT

### For Ideal Gas Boiler Installations

When desired, a room thermostat, in addition to the boiler thermostat, may be connected in the secondary circuit. The room thermostat, which is graduated for a suitable temperature range, re-acts independently on the control valve in exactly the same way as the boiler thermostat. It should be coupled to the gas circuit on the boiler by copper tubing of the following sizes :

Where the total length of circuit does not exceed 30 ft.,  $\frac{3}{16}$ -in. bore.

Where the total length of circuit is between 30 ft. and 60 ft.,  $\frac{1}{4}$ -in. bore.

When over 60 ft.,  $\frac{3}{8}$ -in. iron pipe should be used.

Price, each £1 18s. 6d.

Special adapters for coupling to  $\frac{3}{8}$ -in. iron pipe can be supplied ; prices on application.

## IDEAL DAMPER REGULATOR

### For Heating and Hot Water Supply Boilers



Brit. Patent No. 233589

Brit. Regd. Design

No. 711259

Temperature range

100°-240° F.

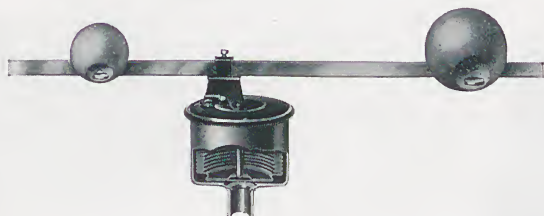
This Regulator is made entirely of metal and has no complicated or perishable parts. The bulb contains a metallic bellows surrounded by a liquid capable of regular expansion and contraction in accordance with the temperature of the water. A stem resting on the bellows passes through a spiral spring and is forked to support the lever rod, which is held in position by a pin, the tension of the spring keeping it raised, and consequently the draught door open, by means of the chain. As the temperature rises the liquid expands and compresses the bellows, operating against the spring and forcing the stem upwards, thus allowing the lever to fall and the ashpit door to close. This action is reversed as the water cools. The bulb containing the bellows is screwed into a cast iron container, which permits of the Regulator being removed should occasion arise without the necessity of emptying the installation. (Descriptive pamphlet sent on request.)

No. 802, Screwed  $1\frac{1}{2}$  ins., Price complete £1 4s. 6d.



# IDEAL DAMPER REGULATOR

For Low Pressure Steam Boilers



The Regulator consists of a flexible bellows, sensitive to the slightest change of steam pressure. There are no joints or seams to become loose or leaky.

No. 905. PRICE, complete with brass bushing and syphon pipe, screwed 1-in. gas thread. . . £2 9s. 6d.

Unless otherwise ordered, Regulators weighted for pressures up to 15 lb. will be supplied. They can, however, also be weighted for  $\frac{1}{2}$  to 4 lb. pressure.

## LEVER SAFETY VALVES

Loaded for 8-15 lb. pressure



Size Inches.			PRICE Each.
$\frac{3}{4}$	..	..	12s. 0d.
1	..	..	15s. 6d.
$1\frac{1}{4}$	..	..	21s. 0d.
$1\frac{1}{2}$	..	..	27s. 6d.
$2\frac{1}{2}$	..	..	56s. 6d.

## STEAM GAUGES

4-in. screwed	$\frac{3}{8}$ in.,	registering 0 to 20 lb.	..	each 18s. 3d.
6-in. ,,	$\frac{3}{8}$ in. ,,	0 to 20 ,,	..	21s. 6d.

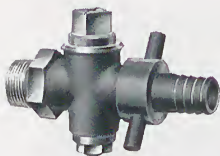
## STEAM BOILER MOUNTINGS

Unless otherwise ordered, Mountings as below are forwarded with all Steam Boilers, and charged as follows :

ITEM	" H " Series Boilers			Magazine Boilers				Gas Boilers	
	1 s. d.	2 s. d.	3 & 4 s. d.	250- 270 s. d.	280- 2110 s. d.	350- 370 s. d.	380- 3130 s. d.	3-GB 50-60 s. d.	3-GB 70-130 s. d.
Steam Gauge (s) ..	18 3	18 3	21 6	25 0	25 0	50 0	50 0	25 0	25 0
Water Gauge (s) ..	38 0	38 0	41 0	38 0	38 0	76 0	76 0	38 0	38 0
Lever Safety Valve(s)	21 0	27 6	56 6	21 0	27 6	42 0	55 0	27 6	56 6
No. 905 Automatic DamperRegulator(s)	49 6	49 6	49 6	49 6	49 6	99 0	99 0	—	—
Draw-off Cocks ..	9 10	9 10	15 0	9 10	9 10	19 8	19 8	—	—
Pressure Pilot Valve	—	—	—	—	—	—	—	159 6	159 6
Complete Set ..	136 7	143 1	183 6	143 4	149 10	286 8	299 8	250 0	279 0



## DRAW-OFF COCKS AND PLUG



Draw-off Cocks, PRICE, screwed $\frac{1}{2}$ in.	..	..	each	4s.	0d.
" " " " $\frac{3}{4}$ "	..	..	"	4s.	11d.
" " " " 1 "	..	..	"	7s.	6d.
" " " " $1\frac{1}{4}$ "	..	..	"	11s.	9d.
" Plug with fixed hose connection, screwed $\frac{1}{2}$ in.				1s.	10d.

## PRESSURE REDUCING VALVES

Royle's " 1902 " Patent

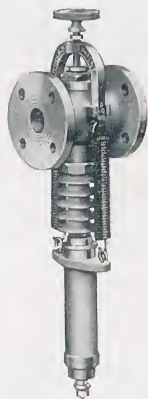
For Boiler Pressures up to 150 lb.

A combined Pressure Reducing and Safety Valve at the price of the former only.

An efficient Reducing Valve with working parts of simple yet most practical design—nothing liable to stick or give trouble in operation.

Easily adjustable by means of the hand wheel; reduced pressure can be varied at will. Alteration of reduced pressure also resets the safety valve. The valve cannot be overloaded.

When ordering, state boiler pressure and highest reduced pressure required.

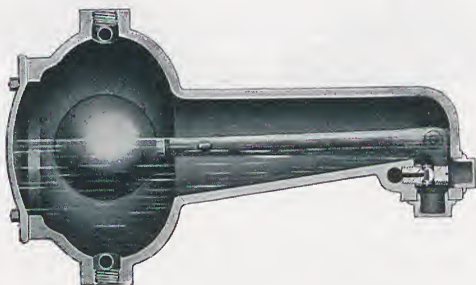


Size of Valves, ins.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
PRICE .. .. .	91/6	105/-	115/6	139/6	198/-	264/-
Extra for Counter-flanges and Bolts ..	6/3	6/3	7/9	9/-	11/3	12/8

Valves are supplied complete with counterflanges and bolts unless otherwise ordered.

All sizes up to and including  $1\frac{1}{2}$  ins. made of gun-metal throughout; the 2-in. valve has cast iron body with gun-metal working parts.

# IDEAL IMMERSED VALVE AUTOMATIC BOILER FEEDER



The Ideal Boiler Feeder is provided with threaded openings on both sides for water gauge, to permit of installation on either side of the boiler. The Feeder should not be used on installations where the steam pressure exceeds 20 lb. or the water pressure 35 lb. To maintain a constant pressure it is advisable that the supply should always be taken from a tank.

## DIMENSIONS

Length overall .. .. .	$23\frac{7}{8}$ ins.	Boiler Connection .. .. .	1 in.
Height „ .. .. .	$13\frac{1}{2}$ „	Gauge .. .. .	$\frac{1}{2}$ „
Width „ .. .. .	$8\frac{1}{4}$ „	Feed Water Inlet .. .. .	$\frac{1}{2}$ „

PRICE of Boiler Feeder .. .. .	£4 0s. 0d.
Extra for Water Gauge Fittings .. .. . per set	1 6 3

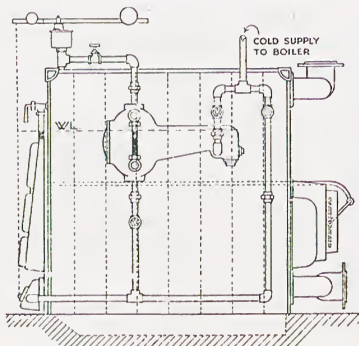
*Fittings are sent with Feeder unless otherwise ordered.*

## DIRECTIONS FOR FIXING

Place the Feeder conveniently near Boiler, at such height that the letters—W.L.—cast on body coincide with the level at which it is desired to maintain the water in Boiler.

Screw the brass bushing and syphon pipe supplied with the Damper Regulator into the top of a  $1\frac{1}{2}$ -in. by 1-in. tee, passing the syphon down the boiler section through the hole in steam baffle. The 1-in. branch of tee should then be connected with the top opening in the large end of the feeder, and the bottom opening of the feeder with Boiler below the water-line. Then make the feed-water connection with small end of Feeder, taking care to ascertain that the water supply pressure exceeds the highest steam pressure under which boiler will at any time operate.

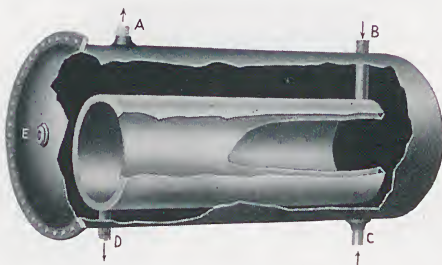
If after Boiler has been filled and Feeder is in operation, it is found that water level in Boiler is either too high or too low, unscrew brass cap at back and turn adjusting screw with a screw-driver to right to make water level lower, or to left to make it higher.





# IDEAL GALVANISED INDIRECT CYLINDERS

Horizontal or Vertical



For position of connections see notes on page 181.

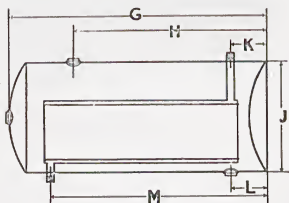
No.	*Nominal Net Capacity Gals.	†Heating Surface Sq. ft.	Test and Working Pressures in lb. per sq. in.				PRICES					
			1/8-in. Plate		3/16-in. Plate		1/8-in. Plate			3/16-in. Plate		
			T	W	T	W	£	s.	d.	£	s.	d.
3	50	17½	76	38	94	47	8	6	9	11	14	0
4	60	20½	76	38	94	47	9	12	6	13	3	0
5	80	27½	64	32	84	42	11	18	0	15	12	0
6	100	35	64	32	84	42	13	18	0	18	12	0
7	150	52	56	28	76	38	18	18	0	24	5	0
8	200	70	50	25	70	35	23	18	0	30	0	0

\* Also approximate hourly capacity raised through 100°. Extra heating surface may be required where long secondary circulations are fixed. Prices on application.

† For Water to Water Heating. Cylinders for Steam to Water Heating quoted for against specification. For particulars of smaller sizes, see pages 108 and 109.

Prices of Cylinders include bolted head complete with India-rubber Jointing Ring.

Extra tappings for electric immersion heaters, thermostats, etc., see page 181.

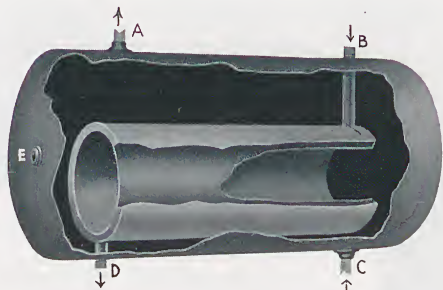


Dimensions in Inches

Nos.	G	H	J	Nos. 3 to 8			Nos. 3C to 8C			Size of Tappings and Heater Connections
				K	L	M	K	L	M	
3 & 3C	50	39	20	5	5	39	7	7	41	1½ ins.
4 & 4C	58	45	20	5	5	45	7	7	47	1½ "
5 & 5C	54	41	24	6	6	43½	7½	7½	45	2 "
6 & 6C	69	53	24	6	6	58½	7½	7½	60	2 "
7 & 7C	65½	50	30	6	6	54	9	9	55½	2½ "
8 & 8C	76½	59	32	7	7	65½	9	9	66½	3 "

IDEAL COPPER INDIRECT CYLINDERS

Horizontal or Vertical



				Horizontal	Vertical
Primary Flow (male thread)	..	..	..	B	D
Return	..	..	..	D	B
Secondary Flow (female thread)	..	..	..	A	E
Return	..	..	..	E	A
Cold Water Feed	..	..	..	C	C

If a Secondary Circuit is not required, the Secondary Return opening should be plugged.

No.	*Nominal Net Capacity Gals.	†Heating Surface Sq. ft.	30 lb. Test					50 lb. Test				
			Gauge		PRICE			Gauge		PRICE		
			Body & Top	Bottom	£	s.	d.	Body & Top	Bottom	£	s.	d.
3C	50	17½	18	16	12	5	0	16	14	14	13	0
4C	60	20½	18	16	13	15	0	16	14	16	10	0
5C	80	27½	16	14	22	18	0	14	12	26	17	6
6C	100	35	16	13	28	10	0	14	12	32	17	6
7C	150	52	14	12	48	10	0	12	10	55	5	0
8C	200	70	14	11	67	0	0	12	9	77	0	0

\* Also approximate hourly capacity raised through 100°. Extra heating surface may be required where long secondary circulations are fixed. Prices on application.  
† For Water to Water Heating. Cylinders for Steam to Water Heating quoted for against specification. For particulars of smaller sizes see pages 108 and 109.

Manhole, if required, can be provided at extra charge.  
These copper cylinders are supplied with fixed ends unless otherwise ordered.  
Prices for copper cylinders fitted with coil or other form of heater on application.  
Cylinders to pass special Water Board Regulations can be supplied; prices on application.  
Extra for bolted head: 3C and 4C, £2 6s. 0d.; 5C and 6C, £2 9s. 0d.; 7C, £3 15s. 0d.; 8C, £4 12s. 0d.

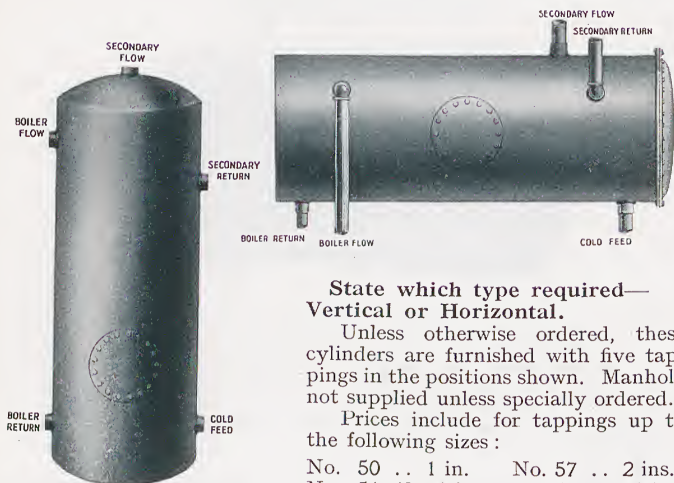
Extra tappings for electric immersion heaters, thermostats, etc.

Size of Tappings, ins.	½	¾	1	1¼	1½	2	2¼	2½	3
Galvd. each	2/5	2/8	3/1	3/9	4/2	5/-	5/4	6/10	9/9
Copper „	1/3	1/6	2/2	3/-	3/8	6/7	7/6	8/11	11/5



# GALVANISED STORAGE CYLINDERS

Vertical or Horizontal



State which type required—  
Vertical or Horizontal.

Unless otherwise ordered, these cylinders are furnished with five tapplings in the positions shown. Manhole not supplied unless specially ordered.

Prices include for tapplings up to the following sizes :

No. 50 .. 1 in.      No. 57 .. 2 ins.  
Nos. 51-53 1½ ins.      „ 58 .. 2½ ins.  
„ 54-56 1½ ins.

Any special positions and sizes required must be indicated by sketch.

No.	Nominal Capacity	Dia- meter	Length over Dome	PRICES With Bolted Head						PRICES With Fixed Head					
				¾-in. Plate			⅝-in. Plate			¾-in. Plate			⅝-in. Plate		
				£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
50	30	18	33	5	3	9	5	9	0	3	1	8	3	19	9
51	40	18	42	5	13	0	5	19	0	3	10	9	4	9	9
52	50	20	42	6	7	0	6	18	3	4	0	6	5	5	6
53	60	20	51	6	16	3	7	12	6	4	9	9	5	19	9
54	75	24	48	9	1	2	8	17	3	6	4	7	6	18	3
55	100	24	64	10	9	7	10	9	6	7	13	0	8	10	6
56	125	27	60	9	2	3	11	16	3	7	5	6	9	12	0
57	150	30	60	10	0	6	13	3	6	8	0	9	10	15	9
58	200	32	72	12	8	6	15	15	0	10	5	3	13	0	6

Prices of Cylinders with bolted head include for India-rubber Jointing Ring.

8-in. Manhole in Body, with India-rubber Jointing

Ring .. .. .	¾-in. Plate	extra	12s.	7d.
Ditto .. .. .	⅝-in. „	„	12s.	7d.
12-in. ditto .. .. .	¾-in. „	„	16s.	0d.
Ditto .. .. .	⅝-in. „	„	19s.	0d.

Prices of larger Cylinders or special sizes on application.



## RADIATOR AIR VALVES



41



42



43

No.	Size, ins.	Polished Brass		Nickel-plated		Chromium-plated	
		$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{4}$
41	Per dozen ..	3/8	4/3	4/3	4/11	5/-	5/9
42	„ ..	5/8	6/6	6/4	7/3	7/2	8/2
43	„ ..	6/8	7/6	7/4	8/3	8/2	9/2



2



3



4 KEY



4

No.	Size, ins.	Polished Brass		Nickel-plated		Chromium-plated	
		$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{4}$
2	Per dozen ..	6/8	7/6	7/4	8/3	8/2	9/2
3	„ ..	7/8	8/6	8/4	9/3	9/2	10/2
4	„ ..	4/8	5/3	5/3	5/11	6/-	6/9



No. 21—Flush Air Valve (Patent No. 319493) for Ideal Rayrad Nos. 15 and 24, screwed  $\frac{3}{8}$ -in. iron pipe thread. Price .. ..  $7\frac{1}{2}d.$  each

Keys for Nos. 4, 21 and 41 .. .. each  $3d.$

Ditto, Nickel-plated .. .. „  $4d.$

Ditto, Chromium-plated .. .. „  $5d.$



401



403



404

Size, Ins.	Description	401	403	404
$\frac{1}{8}$	Polished Brass each	2/6	2/9	2/8
$\frac{1}{4}$	„ „ „	2/8	2/11	2/10

Brass levers for No. 404 .. .. each  $5d.$

## IDEAL BRASS AIRLET PLUG



### For Hot Water Radiators

The Ideal Airlet Plug offers an effective and neat method of venting radiators, eliminating the projecting aircock.



PRICE : 1-in., 2s. 4d. each ;  $1\frac{1}{4}$ -in., 2s. 6d. each ;  $1\frac{1}{2}$ -in., 2s. 8d. each ; 2-in., 3s. 8d. each. Keys, 3d. each.

Can be supplied cast with name in lots of 50 and over ; for smaller quantities a slight extra charge is made.

## IDEAL CAST IRON VENT PLUG



Supplied free of charge with the following radiators :

Ideal Neo-Classic Nos. 2, 4 and 6.

„ „ Window.

„ Neo-Hospital.

„ Classic and Plain Wall.

PRICE : 1-in., 9d. each ;  $1\frac{1}{4}$ -in., 1s. 1d. each ;  $1\frac{1}{2}$ -in., 1s. 6d. each. Keys, 3d. each.

## AUTOMATIC AIR VALVES

For Steam

No. 6



Before fixing the valve, loosen screw "B," and when the radiator becomes hot, tighten the screw gradually until there is no escape of steam at outlet "D." Then screw on the cap tightly to prevent interference with the adjustment.

PRICE, finished and nickel-plated ..	each 2s. 9d.
Drip Cup to screw on outlet ..	10½d.
Extra Composition Plugs ..	6d.

## AUTOMATIC AIR VALVES

### Ideal Airid Valve—for Steam

This valve operates thermostatically by the evaporation of a volatile liquid contained within the float, forcing outward the diaphragm which forms the bottom of the float, raising the pin and instantly closing the valve. A slight cooling relieves the internal pressure and causes the diaphragm to contract, which opens the valve.

Should the valve flood, the float instantly closes, but when the water falls away in the radiator the syphon drains the water in the valve back to the radiator, thus leaving it free to vent every pocket of air.



PRICE .. .. . each 4s. 6d.

## BALANCED PRESSURE STEAM TRAPS

This Steam Trap is operated by a bellows which expands and contracts according to whether it is surrounded by water or steam. The bellows is so filled that the difference between the internal and external pressures remains constant no matter what the actual external pressure may be; consequently the trap functions equally well irrespective of variation in steam pressure. The traps are set accurately before despatch, and no adjustment is necessary or provided. Should the bellows fail, the trap will remain closed and the apparatus to which it is attached will cool down, thus indicating the failure.



### Straight or Angle Pattern

Pressure in lb. per sq. in.	Continuous Discharge in lb. per hour		
	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.	1-in.
1	100	130	250
5	224	290	570
10	316	410	800
15	380	500	975
PRICES .. ..	£1 3s. 6d.	£1 9s. 6d.	£1 14s. 9d.

# IDEAL RADIATOR VALVES AND UNIONS



No. 50, with Union.



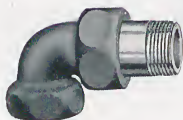
No. 53, with Union.



No. 55, with Union.



No. 54, without Union.  
No. 52, without Union (Iron Wheel).



No. 57,  
Union Elbow.



No. 59,  
M. & F. Union.



No. 30,  
Female Union.

*Prices and Dimensions, pages 187 and 193.*

# IDEAL RADIATOR VALVES AND UNIONS

## Angle Valves

No.	Screwed for W.I. Pipe, ins.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
50	With Union .. ..	3/3	3/5	4/-	5/2	7/5	11/11	—

## Gate Valves

52	Iron Wheel, female ends	—	3/10	4/4	5/3	6/7	8/7	10/11
53	„ „ with Union	—	4/6	5/3	6/7	8/3	11/7	14/4
54	Compo „ female ends	—	3/11	4/4	5/5	6/9	8/11	11/6
55	„ „ with Union	3/10	4/7	5/3	6/7	8/3	11/11	14/10

## Polished and Plated

Polished Finish .. extra	-/6 $\frac{1}{2}$	-/8	-/8	1/-	1/3	1/9	2/3
Rough Body (Nickel-plated) „	-/8	-/10	-/10	1/2	1/5	1/9	2/3
„ (Chromium-plated) „	-/11	1/1	1/1	1/6	1/9	2/3	2/9
Polished and Nickel-plated „	-/9 $\frac{1}{2}$	1/-	1/-	1/4	1/8	2/3	2/9
„ and Chromium-plated „	1/6	1/9	1/10	2/4	2/11	3/8	4/4

With the exception of Nos. 52 and 53, these Valves can be supplied with Lock Shield.

Gun-metal Keys .. each 11*d*.

## Union Elbows and Unions

No.	Screwed for W.I. Pipe, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
57	Standard Pattern ..	—	1/0 $\frac{1}{2}$	1/3	1/8 $\frac{1}{2}$	2/5	3/5	5/9	—
59	„ „ ..	—	1/0 $\frac{1}{2}$	1/2 $\frac{1}{2}$	1/6	2/-	3/2	5/9	—
30	„ „ ..	1/10	1/11	3/-	3/7	4/7	6/9	8/6	12/6

## Polished and Plated

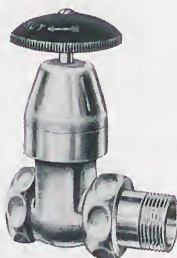
For prices of Nos. 57 and 59 Elbows and Unions in these special finishes, see Nos. 58 and 60 respectively on page 188, as they are identical fittings.



## EASY-CLEAN VALVES



No. 51



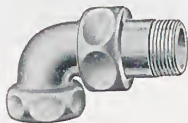
No. 56

No.	Screwed for W.I. Pipe, ins.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
51RB	Smooth cast body and machined E.C. cover .. .. .	3/8	4/8	5/8	8/4
56RB	Smooth cast body and machined E.C. cover .. .. .	4/7	5/8	7/1	10/-
	Rough Body, Nickel-plated, extra .. .. .	-10	-10	1/2	1/5
	„ „ Chromium-plated „ .. .. .	1/1	1/1	1/6	1/9
51	Polished Finish .. .. .	4/4	5/4	6/8	9/7
56	„ „ .. .. .	5/3	6/4	8/1	11/3
	„ and Nickel-plated, extra .. .. .	-4	-4	-4	-5
	„ and Chromium-plated „ .. .. .	1/1	1/2	1/4	1/8

Can be supplied with Lock Shield.

Gun-metal Keys .. each,  $\frac{1}{2}$ -in. to  $1\frac{1}{4}$ -in., 11d.

## EASY-CLEAN UNION ELBOWS AND UNIONS



No. 58



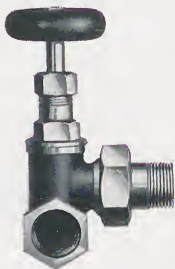
No. 60

No.	Screwed for W.I. Pipe, ins.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
58	Polished Finish .. .. .	1/7	1/9 $\frac{1}{2}$	2/4 $\frac{1}{2}$	3/1	4/5
60	„ „ .. .. .	1/7	1/9	2/1	2/7	3/10
	Extra for Nickel-plated Finish .. .. .	-3 $\frac{1}{2}$	-3 $\frac{1}{2}$	-3 $\frac{1}{2}$	-4	-4
	„ Chromium-plated „ .. .. .	-6	-6	-7	-7 $\frac{1}{2}$	1/-

*Dimensions, page 193.*



## IDEAL CORNER VALVES



No. 160, Right Hand.



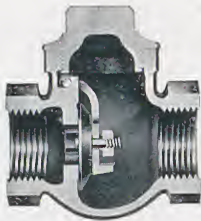
No. 160, Left Hand.

No.	Screwed for W.I. Pipe, ins.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$
160	R.H. or L.H. .. .. .	8/6	10/3	13/6	18/3
	Polished Finish .. .. extra	2/8	2/10	3/3	4/3
	„ and Chromium-plated „	4/5	5/3	5/11	7/10
	Rough body, Chromium-plated „	2/3	2/10	3/3	4/1

Can be supplied with Lock Shield. Gun-metal Keys, each 1/-.

*Dimensions, page 193.*

## SWING CHECK VALVES



No.	Screwed for W.I. Pipe, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
140	Brass Valve, Screwed	4/-	4/-	4/7	6/-	7/5	9/-	11/5	15/-

*Dimensions, page 193.*

# IRON BODY GATE VALVES

With Gun-metal Mountings



Size Ins.	No. 100 Screwed	No. 101 Flanged	No. 101 Flanged	
			Face to Face ins.	Flange Diameter ins.
2	38/6	41/-	7 $\frac{3}{4}$	6
2 $\frac{1}{2}$	43/6	43/-	8	6 $\frac{1}{2}$
3	49/9	46/-	8 $\frac{1}{4}$	7 $\frac{1}{4}$
4	65/-	57/3	8 $\frac{1}{2}$	8 $\frac{1}{2}$
5	90/6	81/3	9 $\frac{1}{2}$	10
6	—	90/6	9 $\frac{1}{2}$	11

All No. 101 valves are regularly supplied with flanges faced and drilled British Standard Table No. 1.

## GLOBE VALVES

No.	Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$
125	Bronze Seat ..	2/3	2/10	3/2
120	Renewable Disc ..	4/3	4/11	5/6
No.	Size, ins.	$\frac{3}{4}$	1	1 $\frac{1}{4}$
125	Bronze Seat ..	4/11	6/6	9/3
120	Renewable Disc ..	7/1	9/3	12/9
No.	Size, ins.	1 $\frac{1}{2}$	2	
125	Bronze Seat ..	12/1	16/5	
120	Renewable Disc ..	16/8	25/8	



*Dimensions, page 193.*

## IDEAL CONCEALED VALVES

### For Water Radiators

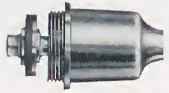
Ideal Concealed Valves give the advantage of a top feed to radiators having supply and return connections at bottom, this being secured by assembling the first and second sections at bottom with a solid malleable iron nipple, so that the water upon entering rises up the first section before passing through the radiator under control of the valve.



Nos. 4 and 10



No. 12



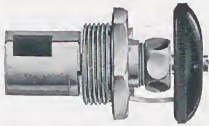
Loek Shield type

PRICES, including faced nipples fitted into radiator :

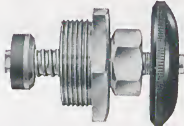
No. 4—1¼-in. (Easy-clean) for Neo-Hospital (5¾ and 7¼-in.)	7/3
„ 10—1¼-in. „ Neo-Classic Radiators	7/3
„ 12—1-in. „ for Neo-Classic and 3-in. Neo-Hospital	5/5
If with brass top nipple, extra .. .. .	2/6
Extra for Nickel-plating —/11½. Extra for Chromium-plating	1/3

Can be supplied with Lock Shield. Keys extra, each 1/1.  
Order valve with radiator to ensure the special nipples being used.

### For Ideal Rayrad Nos. 15 and 24



No. 8



No. 14



No. 14R

No. 8. Sleeve pattern, suitable only for gravity circulations	11/6
No. 14. Screw-down pattern, for pump circulations, also for steam .. .. .	11/6
No. 14R. Screw-down pattern, Double Regulating, for pump circulations, also for steam .. .. .	12/9

The Nos. 14 and 14R Valves can also be used for gravity circulations provided the flow connection to radiator does not exceed ¾ in.

No. 14 Valves can be supplied with Lock Shield, Keys extra, each 1/-.

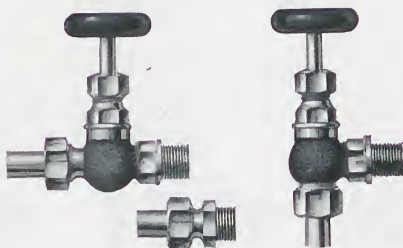
### For Ideal Rayrad Nos. 35, 36 and 36A

See page 33. Suitable for fixing at either corner, top or bottom.

No. 13. ½ or ¾-in., Screw-down pattern, for either gravity or pump circulations, also for steam .. .. .	10/-
No. 13R. ½ or ¾-in., Screw-down pattern, Double Regulating, for either gravity or pump circulations, also for steam .. .. .	10/9

No. 13 Valve can be supplied with Lock Shield, Keys extra, each 1/1.

## SHIPS' HEATER VALVES



Male end screwed gas thread. Female union screwed for copper pipe,  $\frac{3}{8}$ -in. or  $\frac{1}{2}$ -in. outside diameter, 26 threads to the inch.

For Pipe Size, in.				$\frac{3}{8}$ d.	$\frac{1}{2}$ d.
Valve, Straight Pattern	..	..	..	4 10	5 0
„ Angle Pattern	..	..	..	4 10	5 0
Straight Union	..	..	..	1 7	1 11

## IDEAL UNION WRENCH



This Wrench enables the connections of Union Radiator Valves or Elbows to be made quickly and tightly without fear of damage to the Unions. The Wrenches are made of malleable iron, japanned black, and can be used for  $\frac{1}{2}$ ,  $\frac{3}{4}$ , 1 and  $1\frac{1}{4}$ -in. sizes. PRICE, 2s. 0d. each.

## THROTTLE VALVES

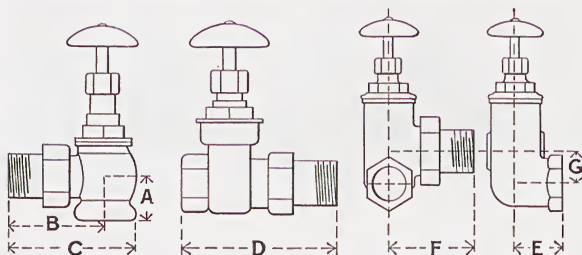
For use with Ideal Indirect Cylinders

Complete with Index Plate.

PRICE, $\frac{3}{4}$ -in.	..	..	..	7s.	4d.
„ 1-in.	..	..	..	9s.	3d.
„ $1\frac{1}{4}$ -in.	..	..	..	11s.	0d.
„ $1\frac{1}{2}$ -in.	..	..	..	15s.	9d.



# MEASUREMENTS OF VALVES AND UNIONS



Size, ins.		$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
No. 50	{ A	$\frac{15}{16}$	$1\frac{1}{16}$	$1\frac{1}{4}$	$1\frac{11}{32}$	$1\frac{21}{32}$	—	—
	{ B	$2\frac{1}{4}$	$2\frac{9}{32}$	2	$2\frac{7}{8}$	$3\frac{5}{16}$	—	—
	{ C	$2\frac{13}{16}$	$2\frac{15}{16}$	$3\frac{3}{8}$	$3\frac{3}{4}$	$4\frac{1}{4}$	—	—
„ 51	{ A	$\frac{15}{16}$	$1\frac{1}{16}$	1	$1\frac{11}{32}$	$1\frac{21}{32}$	—	—
	{ B	$2\frac{1}{4}$	$2\frac{9}{32}$	$2\frac{3}{4}$	$2\frac{7}{8}$	$3\frac{5}{16}$	—	—
	{ C	$2\frac{13}{16}$	$2\frac{15}{16}$	$3\frac{3}{8}$	$3\frac{3}{4}$	$4\frac{1}{4}$	—	—
„ 52 & 54	D	—	$1\frac{27}{32}$	$2\frac{1}{16}$	$2\frac{9}{32}$	$2\frac{17}{32}$	$2\frac{27}{32}$	$3\frac{5}{32}$
„ 53 & 55	D	$3\frac{1}{8}$	$3\frac{3}{16}$	$3\frac{17}{32}$	$3\frac{27}{32}$	$4\frac{7}{32}$	$4\frac{29}{32}$	$5\frac{7}{16}$
„ 56	D	$3\frac{1}{4}$	$3\frac{3}{16}$	$3\frac{17}{32}$	$3\frac{27}{32}$	$4\frac{7}{32}$	—	—
„ 57 Union Elbow	{ A	$\frac{13}{16}$	$\frac{15}{16}$	$1\frac{7}{32}$	$1\frac{1}{2}$	$1\frac{23}{32}$	—	—
	{ B	$1\frac{31}{32}$	2	$2\frac{17}{32}$	$2\frac{25}{32}$	$3\frac{1}{8}$	—	—
	{ C	$2\frac{5}{8}$	3	$3\frac{5}{16}$	$3\frac{3}{4}$	$4\frac{5}{16}$	—	—
„ 58 „	{ A	$\frac{13}{16}$	$\frac{15}{16}$	$1\frac{7}{32}$	$1\frac{1}{2}$	$1\frac{23}{32}$	—	—
	{ B	$2\frac{3}{32}$	$2\frac{1}{4}$	$2\frac{17}{32}$	$2\frac{25}{32}$	3	—	—
	{ C	$2\frac{5}{8}$	3	$3\frac{5}{16}$	$3\frac{3}{4}$	$4\frac{5}{16}$	—	—
„ 59 Union	D	$1\frac{15}{16}$	$2\frac{3}{16}$	$2\frac{1}{2}$	$2\frac{11}{16}$	$2\frac{15}{16}$	—	—
„ 60 „	D	$2\frac{1}{16}$	$2\frac{1}{16}$	$2\frac{5}{16}$	$2\frac{9}{16}$	$2\frac{25}{32}$	—	—
„ 30 „	D	$1\frac{3}{4}$	$2\frac{1}{16}$	$2\frac{1}{4}$	$2\frac{5}{16}$	$2\frac{11}{16}$	$3\frac{3}{16}$	$3\frac{3}{8}$
„ 120	D	$2\frac{3}{8}$	$2\frac{1}{2}$	$3\frac{1}{8}$	$3\frac{5}{8}$	4	$4\frac{7}{16}$	$5\frac{3}{8}$
„ 125	D	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5
„ 140	D	—	$2\frac{1}{2}$	$2\frac{15}{16}$	$3\frac{5}{16}$	$3\frac{7}{8}$	$4\frac{1}{4}$	5
„ 160	{ C	—	3	$3\frac{15}{16}$	$3\frac{15}{16}$	$4\frac{3}{8}$	—	—
	{ E	—	$1\frac{3}{16}$	$1\frac{5}{16}$	$1\frac{3}{8}$	$1\frac{13}{16}$	—	—
	{ F	—	$2\frac{1}{2}$	$2\frac{9}{16}$	$3\frac{3}{16}$	$3\frac{3}{8}$	—	—
	{ G	—	$\frac{13}{16}$	$\frac{15}{16}$	$1\frac{1}{16}$	$1\frac{1}{4}$	—	—

# IDEAL FULL-WAY COPPER FITTINGS

Brit. Patents Nos. 412075, 423334, 424583, 424675, 424869.

For use with light gauge copper tube to Brit. Standard No. 659.



100

Tee.



100R

Tee (Reducing).

Branch, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	PRICES	
									100	100R
Run {	$\frac{1}{4}$	×							1/2	—
	$\frac{3}{8}$	×	×						1/4	1/4
	$\frac{1}{2}$	×	×	×					$1\frac{1}{5}\frac{1}{2}$	$1\frac{1}{5}\frac{1}{2}$
	$\frac{3}{4}$	×	×	×					1/11	1/11
	1		×	×	×				$3\frac{1}{11}\frac{1}{2}$	$3\frac{1}{11}\frac{1}{2}$
	$1\frac{1}{4}$		×	×	×	×			5/4	5/4
	$1\frac{1}{2}$			×	×	×	×		8/-	8/-
2					×	×	×	×	11/8	11/8



300

Elbow.



300R

Elbow (Reducing).

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	PRICES	
									300	300R
$\frac{1}{4}$	×								-/4 $\frac{1}{2}$	—
$\frac{3}{8}$		×							-/5 $\frac{3}{4}$	—
$\frac{1}{2}$		×	×						-/7 $\frac{1}{2}$	-/7
$\frac{3}{4}$			×	×					-/11 $\frac{1}{2}$	-/10
1				×	×				$1\frac{1}{5}\frac{1}{2}$	1/2
$1\frac{1}{4}$						×			$1\frac{1}{11}\frac{1}{2}$	—
$1\frac{1}{2}$							×		2/6	—
2								×	4/2	—

For Dimensions, see pages 200 and 201.



# IDEAL FULL-WAY COPPER FITTINGS

Brit. Patents Nos. 412075, 423334, 424583, 424675, 424869.

For use with light gauge copper tube to Brit. Standard No. 659.



301

M. & F. Elbow.



303

45° Elbow.



304

45° M. & F. Elbow.

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
301 ..	$-4\frac{1}{4}$	$-5\frac{1}{2}$	$-7\frac{1}{4}$	$-11$	$1\frac{5}{8}$	$1\frac{11}{16}$	$2\frac{5}{8}$	$4\frac{1}{8}$
303 ..	—	$-5$	$-6\frac{1}{2}$	$-9$	$1\frac{1}{2}$	$1\frac{1}{6}$	$1\frac{11}{16}$	$3\frac{3}{8}$
304 ..	—	$-4\frac{3}{4}$	$-6\frac{1}{4}$	$-8\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{5}{8}$	$1\frac{10}{16}$	$3\frac{1}{2}$



305

Female Copper  
to Female Iron.



306

Female Copper  
to Male Iron.



320

Return Bend.

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
305 ..	$1\frac{5}{8}$	$1\frac{1}{8}$	$2\frac{1}{8}$	$3\frac{1}{8}$	$3\frac{10}{16}$	$5\frac{1}{8}$	$7\frac{5}{8}$	—
306 ..	$1\frac{1}{4}$	$1\frac{1}{6}$	$1\frac{10}{16}$	$2\frac{6}{8}$	$3\frac{4}{16}$	$4\frac{5}{8}$	$6\frac{2}{8}$	—
320 ..	$1\frac{1}{8}$	$1\frac{3}{8}$	$1\frac{7}{8}$	$2\frac{3}{8}$	$3\frac{3}{8}$	$4\frac{3}{8}$	$5\frac{4}{8}$	$8\frac{9}{8}$



400

Female Double Socket.



401

Sliding Socket.

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
400 ..	$-2\frac{1}{2}$	$-2\frac{3}{4}$	$-3$	$-4\frac{1}{4}$	$-6\frac{1}{2}$	$-8$	$-9\frac{1}{2}$	$1\frac{1}{2}$
401 ..	$-3\frac{1}{4}$	$-3\frac{3}{4}$	$-4\frac{1}{4}$	$-5\frac{3}{4}$	$-8$	$-9\frac{3}{4}$	$-11\frac{1}{2}$	$1\frac{1}{5}$

For Dimensions, see pages 200 and 201.

# IDEAL FULL-WAY COPPER FITTINGS

Brit. Patents Nos. 412075, 423334, 424583, 424675, 424869.

For use with light gauge copper tube to Brit. Standard No. 659.



402



403

Female  
Reducing Socket.

Male and Female  
Reducing Socket.

Female End, ins.		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	PRICES	
									402	403
Female 402	$\frac{3}{8}$	† ×							—	-/2 $\frac{1}{2}$
	$\frac{1}{2}$	† ×	×						-/3 $\frac{1}{4}$	-/3 $\frac{1}{4}$
	$\frac{3}{4}$		×	×					-/5 $\frac{3}{4}$	-/5 $\frac{3}{4}$
	1		×	×	×				-/10	-/10
Male End 403	$1\frac{1}{4}$				×	×			1/-	1/-
	$1\frac{1}{2}$				×	×	×		1/2	1/2
	2					×	×	×	1/11	1/11

† 402 only.



410



450

Copper to Lead Connector.

Cap.

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
410 ..	—	—	-/7 $\frac{1}{4}$	-/8 $\frac{3}{4}$	-/11	1/0 $\frac{1}{2}$	—	—
450 ..	-/1 $\frac{1}{2}$	-/2	-/2 $\frac{1}{4}$	-/3	-/4 $\frac{1}{4}$	-/5	-/6 $\frac{1}{4}$	-/8 $\frac{1}{2}$



470



472

Copper to Copper  
Female Union.

Union Adapter.  
Female Copper to Male Iron.  
No. 471 Female Copper to Female Iron.

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
470 ..	1/4 $\frac{1}{2}$	1/5 $\frac{1}{2}$	1/8	2/-	3/1	4/5	5/6	8/9
471 ..	1/8	1/11	2/11	3/6	4/-	5/7	6/5	11/-
472 ..	1/5 $\frac{1}{2}$	1/8	2/2 $\frac{1}{2}$	2/8	3/3	4/5	5/11	9/10

For Dimensions, see pages 200 and 201.

# IDEAL FULL-WAY COPPER FITTINGS

Brit. Patents Nos. 412075, 423334, 424583, 424675, 424869.

For use with light gauge copper tube to Brit. Standard No. 659.



500



501



502



503

Female Copper  
to Female Iron.

Female Copper  
to Male Iron.

Male Copper to  
Female Iron.

Male Copper to  
Male Iron.

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
500 ..	$-\frac{7}{8}\frac{3}{4}$	$-\frac{10}{8}$	$1\frac{1}{1}\frac{1}{2}$	$1\frac{9}{9}\frac{1}{2}$	$2\frac{1}{1}$	$2\frac{9}{9}$	$4\frac{7}{7}$	$7\frac{-}{-}$
501 ..	$-\frac{7}{7}\frac{3}{4}$	$-\frac{8}{8}\frac{1}{2}$	$-\frac{11}{11}$	$1\frac{2}{2}\frac{1}{2}$	$1\frac{7}{7}$	$2\frac{1}{1}$	$3\frac{4}{4}$	$6\frac{-}{-}$
502 ..	$-\frac{9}{9}\frac{1}{2}$	$-\frac{10}{10}\frac{1}{2}$	$1\frac{2}{2}\frac{1}{2}$	$1\frac{8}{8}\frac{1}{2}$	$2\frac{4}{4}$	$2\frac{11}{11}$	$4\frac{9}{9}$	$7\frac{3}{3}$
503 ..	$-\frac{8}{8}\frac{1}{2}$	$-\frac{9}{9}$	$-\frac{11}{11}\frac{1}{2}$	$1\frac{4}{4}$	$1\frac{8}{8}$	$2\frac{1}{1}$	$3\frac{6}{6}$	$6\frac{-}{-}$



504



505

Tank Adapter. Female  
Copper to Male Iron.

Double Nut Tank Connector.  
Female Copper to Male Iron.

Size, ins.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
504 ..	$1\frac{4}{4}$	$1\frac{6}{6}$	$2\frac{-}{-}$	$2\frac{8}{8}$	$4\frac{2}{2}$	$5\frac{6}{6}$	$7\frac{4}{4}$
505 ..	$1\frac{1}{1}$	$1\frac{3}{3}$	$1\frac{11}{11}$	$2\frac{8}{8}$	$3\frac{4}{4}$	$4\frac{5}{5}$	$6\frac{4}{4}$



550



555

Bent Connector with Wall Plate.  
Female Copper to Female Iron.

Tee with Wall Plate. Female  
Copper to Female Iron.

Female Copper Tube End, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	Rough Brass	Pol- ished
Female Iron End	$\left\{ \begin{array}{l} \frac{1}{4} \\ \frac{3}{8} \\ \frac{1}{2} \\ \frac{3}{4} \\ \frac{1}{2} \end{array} \right.$	×			$1\frac{7}{7}$	$1\frac{11}{11}$
550		×			$1\frac{8}{8}$	$2\frac{-}{-}$
		×	×		$1\frac{9}{9}$	$2\frac{1}{1}\frac{1}{2}$
555			×	×	$2\frac{3}{3}\frac{1}{2}$	$2\frac{10}{10}$
			×		$2\frac{9}{9}$	—

For Dimensions, see pages 200 and 201.

# IDEAL FULL-WAY COPPER FITTINGS

Brit. Patents Nos. 412075, 423334, 424583, 424675, 424869

For use with light gauge copper tube to Brit. Standard No. 659.



590



600



601



591



602

	Size, ins.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
590 Barrelled Finish per doz.		4/9	5/6	6/7	7/9	10/-	13/3	16/6
„ Polished „ „		6/5	7/2	8/3	9/4	12/2	16/-	19/10
591 Barrelled „ „		4/9	5/6	6/7	7/9	10/-	13/3	16/6
„ Polished „ „		6/5	7/2	8/3	9/4	12/2	16/-	19/10
600 .. .. „		1/10	2/3	2/10	4/1	—	—	—
601 .. .. „		-/6	-/6	-8 $\frac{1}{2}$	-/10	1/4	1/11	2/6
602 .. .. „		-/10	-/11	1/0 $\frac{1}{2}$	1/8	2/-	2/11	4/7



610



620



630

Pillar Tap Connector.  
Male Copper.

Globe Tap Connector.  
Female Copper to  
Male Iron.

Ball Tap Connector.  
Female Copper.

	Size, in.	$\frac{1}{2}$	$\frac{3}{4}$
610 GS (Ground Seat) .. ..		1/1	1/4 $\frac{1}{2}$
610 WS (Washed Seat) .. ..		1/1	1/4 $\frac{1}{2}$
620 .. ..		1/10 $\frac{1}{2}$	2/1
630 GS (Ground Seat) .. ..		1/6	2/-
630 WS (Washed Seat) .. ..		1/6	2/-

For Dimensions, see pages 200 and 201.

# STOP COCKS AND GATE VALVES

For use with Ideal Copper Fittings



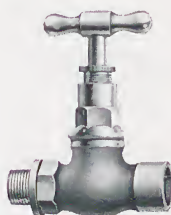
720

Double Female Copper.



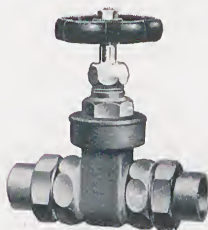
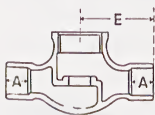
721

Female Copper to Lead.



722

Female Copper to Male Iron.



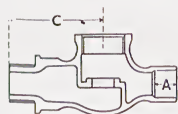
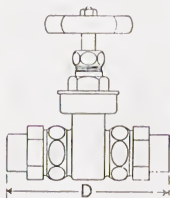
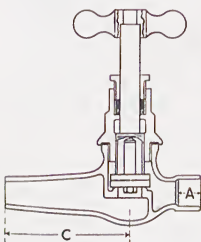
730

Double Female Copper.



731

Female Copper to Female Iron.



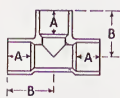
Size ins.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
720 . .	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{8}{8}$	—	—	—
721 . .	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{8}{8}$	—	—	—
722 . .	$\frac{3}{8}$	$\frac{5}{8}$	$\frac{8}{8}$	—	—	—
730 . .	$\frac{6}{8}$	$\frac{7}{10}$	$\frac{9}{0}$	$\frac{11}{6}$	$\frac{14}{6}$	$\frac{18}{9}$
731 . .	$\frac{5}{6}$	$\frac{6}{5}$	$\frac{7}{7}$	$\frac{9}{7}$	$\frac{12}{3}$	$\frac{15}{9}$

## Dimensions in Inches

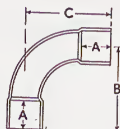
No. Size	720		721		722		730	731
	A	E	A	C	A	C	D	D
$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{2}$	$2\frac{3}{4}$	$\frac{1}{2}$	$2\frac{1}{16}$	$3\frac{1}{2}$	$2\frac{3}{8}$
$\frac{3}{4}$	$\frac{3}{4}$	$2\frac{1}{8}$	$\frac{3}{4}$	3	$\frac{3}{4}$	$2\frac{3}{8}$	$4\frac{1}{8}$	$3\frac{1}{8}$
1	$\frac{1}{16}$	$2\frac{3}{8}$	$\frac{1}{16}$	$3\frac{1}{2}$	$\frac{1}{16}$	$3\frac{1}{2}$	$4\frac{3}{4}$	$3\frac{1}{2}$
$1\frac{1}{4}$	—	—	—	—	—	—	$5\frac{3}{8}$	4
$1\frac{1}{2}$	—	—	—	—	—	—	$6\frac{1}{8}$	$4\frac{3}{8}$
2	—	—	—	—	—	—	6	$4\frac{1}{4}$



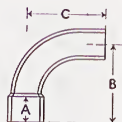
# IDEAL FULL-WAY COPPER FITTINGS



100



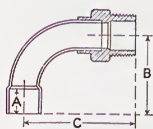
300



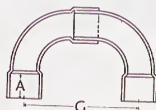
301



303 & 304



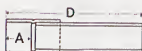
305 & 306



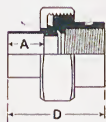
320



400 & 401



410



470, 471 & 472

## Dimensions in Inches

No.	100		300			301			303	304	305			306		
Size	A	B	A	B	C	A	B	C	A	A	A	B	C	A	B	C
1/4	1/4	17/32	1/4	1/16	1/16	1/4	1/16	15/16	1/4	1/4	1/4	1/16	1/8	1/4	1/16	21/32
3/8	3/8	3/4	3/8	1/32	1/32	3/8	1/32	1/16	3/8	3/8	3/8	1/16	1/16	3/8	1/16	11/16
1/2	1/2	15/16	1/2	1/32	1/32	1/2	1/32	1/16	1/2	1/2	1/2	1/16	1/16	1/2	1/16	1/2
3/4	3/4	1	3/4	2/3	2/3	3/4	2/3	2/3	3/4	3/4	3/4	2/3	2/3	3/4	2/3	3/4
1	1	15/16	1	11/16	15/16	1	5/8	2	1	1	1	5/8	3	1	3	5/16
1 1/4	1 1/16	2	1 1/16	3	3	1 1/16	3	2 7/8	1 1/16	1 1/16	1 1/16	3	4 5/8	1 1/16	3	3 3/4
1 1/2	1 1/8	2 3/16	1 1/8	3 5/16	3 5/16	1 1/8	3 5/16	3 3/16	1 1/8	1 1/8	1 1/8	3 5/16	4 3/8	1 1/8	3 5/16	4 1/8
2	1 3/16	2 1/2	1 3/16	3 11/16	3 11/16	1 3/16	3 11/16	3 1/2	1 3/16	1 3/16	1 3/16	3 11/16	4 3/4	1 3/16	3 11/16	4 21/32

No.	320		400		401		410		470		471		472	
Size	A	G	A	D	A	D	A	D	A	D	A	D	A	D
1/4	1/4	1 27/32	1/4	9/16	1/4	1 1/4	—	—	1/4	29/32	1/4	1 9/32	1/4	1 3/8
3/8	3/8	2 3/32	3/8	13/16	3/8	1 1/4	—	—	3/8	1 3/8	3/8	1 9/16	3/8	1 11/16
1/2	1/2	3 3/4	1/2	1 1/16	1/2	1 5/8	1/2	1 1/16	1/2	1 15/16	1/2	1 13/16	1/2	1 13/16
3/4	3/4	4 7/8	3/4	1 1/32	3/4	2 1/4	3/4	3 1/16	3/4	2 1/16	3/4	2 1/4	3/4	2 1/4
1	1	5 1/2	1	1 1/8	1	2 3/4	1	4 3/32	1	2 7/16	1	2 3/4	1	2 3/4
1 1/4	1 1/16	6 1/2	1 1/16	1 1/4	1 1/16	3 1/2	1 1/16	5 1/4	1 1/16	2 3/2	1 1/16	3 1/8	1 1/16	2 15/16
1 1/2	1 1/8	6 5/8	1 1/8	1 3/8	1 1/8	3 3/8	—	—	1 1/8	2 3/2	1 1/8	3 3/16	1 1/8	3 3/2
2	1 3/16	6 1/2	1 3/16	1 1/2	1 3/16	3 3/8	—	—	1 3/16	3 1/2	1 3/16	3 7/16	1 3/16	3 3/8



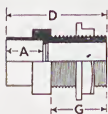
## IDEAL FULL-WAY COPPER FITTINGS



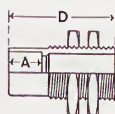
500 &amp; 501



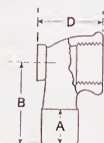
502 &amp; 503



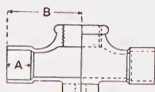
504



505



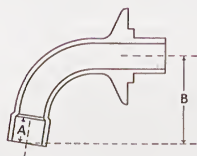
550



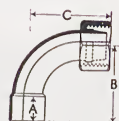
555



610



620



630

## Dimensions in Inches

No.	470W		471W		472W		500		501		502		503	
Size	A	D	A	D	A	D	A	D	A	D	D	J	D	J
1/4	1/4	5/32	1/4	11/64	1/4	13/64	1/4	51/64	1/4	47/64	1	5/16	15/16	5/16
3/8	3/8	13/32	3/8	13/32	3/8	141/64	3/8	31/32	3/8	7/8	1 1/4	7/16	1 5/16	7/16
1/2	1/2	119/32	1/2	163/64	1/2	133/32	1/2	1 9/32	1/2	1 1/16	1 1/16	9/16	1 15/32	9/16
3/4	3/4	2 1/8	3/4	223/64	3/4	225/64	3/4	1 11/16	3/4	1 15/32	1 15/32	13/16	1 3/4	13/16
1	15/16	2 17/32	15/16	2 3/4	15/16	2 11/16	15/16	2	15/16	1 11/16	2 11/16	1 3/32	2 1/16	1 3/32
1 1/4	—	—	—	—	—	—	1 1/16	2 9/32	1 1/16	1 29/32	2 19/32	1 5/32	2 9/32	1 5/32
1 1/2	—	—	—	—	—	—	1 1/8	2 3/8	1 1/8	2 3/32	2 23/32	1 7/32	2 17/32	1 7/32
2	—	—	—	—	—	—	1 3/16	2 7/16	1 3/16	2 11/32	2 15/16	1 7/16	2 13/16	1 7/16

No.	504			505		550			555			610		620		630		
Size	A	D	G	A	D	A	B	D	A	B	D	D	H	A	B	A	B	C
1/4	—	—	—	—	—	1/4	1	1 1/16	—	—	—	—	—	—	—	—	—	—
3/8	3/8	1 7/32	3/4	3/8	1 7/32	3/8	1 1/2	1 1/4	—	—	—	—	—	—	—	—	—	—
1/2	1/2	1 19/32	15/16	1/2	1 19/32	1/2	1 5/8	1 1/2	1/2	1 17/32	1 3/8	1 5/8	1	1/2	13/4	1/2	1 21/32	2 3/32
3/4	3/4	2 1/32	1 1/8	3/4	2 1/32	3/4	1 3/4	1 7/8	—	—	—	2	1 1/4	2 3/4	2 1/2	2 3/16	2 13/16	—
1	15/16	2 13/32	1 1/16	15/16	2 15/32	—	—	—	—	—	—	—	—	—	—	—	—	—
1 1/4	1 1/16	2 23/32	1 1/2	1 1/16	2 23/32	—	—	—	—	—	—	—	—	—	—	—	—	—
1 1/2	1 1/8	2 25/32	1 1/2	1 1/8	2 25/32	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	1 3/16	2 27/32	—	—	—	—	—	—	—	—	—	—	—	—	—

# SUNDRIES FOR COPPER FITTINGS

## IDEAL SOLDER

Specially made up in handy reels of 11G Solder Wire, is most economical in use, and is recommended for all general Plumbing and Heating Installations.

PRICE, 1-lb. Reels,  $\frac{2}{5}$  each. 2-lb. Reels,  $\frac{4}{10}$  each.  
(1 lb. = approx. 24 ft.)

Approximate amount of Solder needed for each joint is equal to the nominal diameter of the pipe. Examples: 1-in. Fitting, use 1 in. of Solder; 2-in. Fitting, use 2 ins. of Solder.

## SOLDERING PASTE

It is recommended that only the best Non-corrosive Soldering Paste be used. Ideal Non-corrosive Soldering Paste is supplied in 4-oz. and 1-lb. tins. 4-oz. Tins, 8d. each; 1-lb. Tins,  $\frac{2}{6}$  each.

## STEEL WOOL

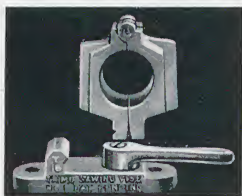
For cleaning fittings and tube. Supplied in convenient 1-lb. cartons,  $\frac{1}{8}$  each.

## COPPER TUBE

The copper tube used with Ideal Full-Way Copper Fittings should be of best quality, and to the 1936 British Standard No. 659 for light gauge copper tube as hereunder.

Large stocks of suitable half-hard tube are available at various depots to ensure prompt deliveries to all parts. Although orders must be sent to Hull, despatches will be made from nearest centre. Quotations given on application.

Nominal Size Ins.	Outside Diameter Ins.	Wall Thickness Ins.	S.W.G.	Theoretical Weight Pounds per lineal foot
$\frac{1}{4}$	·346	·048	18	·17
$\frac{3}{8}$	·471	·048	18	·25
$\frac{1}{2}$	·596	·048	18	·32
$\frac{3}{4}$	·846	·048	18	·46
1	1·112	·056	17	·71
$1\frac{1}{4}$	1·362	·056	17	·88
$1\frac{1}{2}$	1·612	·056	17	1·05
2	2·128	·064	16	1·60



## COPPER TUBE SAWING VICE

This vice will hold the shortest pieces of tubing and ensure a square cut even when working to a fraction of an inch. A perfect bearing against the shoulder of fitting is therefore obtained. There is no burr to remove and no truing up afterwards needed, as the saw blade moves between close guides, obviating any possibility of a wavy cut. Pressure

on the vice cannot force the tube out of shape.

Base and 6 Vices,  $\frac{1}{2}$ -in. to 2-in., £4 1s. 6d. Base only, 5s. 6d.

Vices,  $\frac{1}{2}$ -in. to  $1\frac{1}{2}$ -in., each 13s. 6d.; 2-in., 16s. 6d.

# WROUGHT TUBES AND FITTINGS

## Revised List of Extras and Allowances for Short and Exact Lengths

### RANDOM LENGTH TUBES, SCREWED AND SOCKETED

(Sizes  $\frac{1}{8}$ -in. to  $\frac{3}{8}$ -in.—8 ft. and up, and sizes  $\frac{1}{2}$ -in. to 6-in.—15 ft. and up) at our option, are charged at List Price, less current discount.

### ALLOWANCES

1. Random Length Tubes (sizes  $\frac{1}{8}$ -in. to  $\frac{3}{8}$ -in.—8 ft. and up, and sizes  $\frac{1}{2}$ -in. to 6-in.—15 ft. and up).

(a) Screwed, without sockets, less  $2\frac{1}{2}\%$  on the *Net*.

(b) Plain ends, without sockets, less  $3\frac{3}{4}\%$  on the *Net*.

### EXTRAS

2. Random Lengths under 15 ft. are charged as follows :

	2-ft. to under 4-ft.	4-ft. to under 6-ft.	6-ft. to under 8-ft.	8-ft. to under 15-ft.
Screwed and Socketed . .	15%	$7\frac{1}{2}\%$	$3\frac{3}{4}\%$	$2\frac{1}{2}\%$
Screwed without Sockets	$7\frac{1}{2}\%$	$3\frac{3}{4}\%$	$2\frac{1}{2}\%$	$1\frac{1}{4}\%$
Plain ends without Sockets	$3\frac{3}{4}\%$	$1\frac{3}{4}\%$	$1\frac{1}{4}\%$	$\frac{3}{4}\%$
All the above less gross.				

Any restriction within the above ranges may be subject to a further extra.

N.B.—In  $\frac{1}{8}$ -in.,  $\frac{1}{4}$ -in. and  $\frac{3}{8}$ -in. sizes the extras indicated above for lengths 8 ft.—15 ft. do not apply.

3. EXACT LENGTHS.—For Tubes in exact lengths, irrespective of length, an extra of  $2\frac{1}{2}\%$  less gross discount will be charged in addition to the extras for short lengths and to any other extras or allowances which may be applicable.

4. Coating. Tubes and Fittings coated inside and outside, or outside only, with bituminous solution, are charged at  $2\frac{1}{2}\%$  less gross discount.

5. Tubes and Fittings painted red are charged at Steam discounts.

6. Tubes and Fittings painted blue are charged at Water discounts.

7. Pieces, Longscrews and Barrel Nipples in exact lengths are charged at List Prices with an extra of 5% less gross discount.

8. Tubes and Fittings of intermediate diameters are charged at the List Price of the next larger size, and are subject to a special discount.

9. Carriage on orders not amounting to £10 net value will be to buyer's account.

10. Packages for Fittings are not charged.

# STANDARD PRICE LIST OF WROUGHT TUBES AND FITTINGS

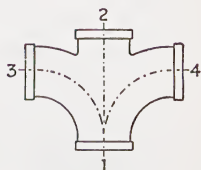
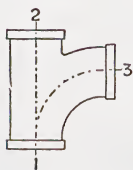
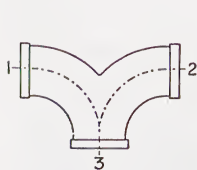
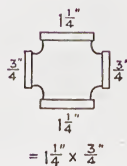
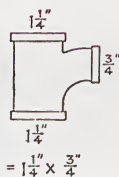
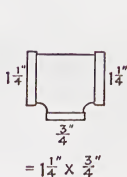
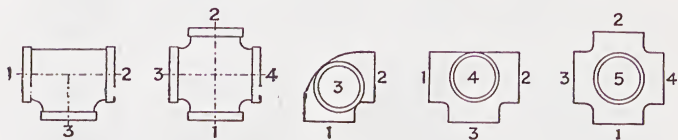
	Internal Diameter, ins.	$\frac{1}{8}$ & $\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	5	6
TUBES	Tubes, 2 ft. long and over .. per ft.	-/4	-/4 $\frac{1}{4}$	-/5 $\frac{1}{2}$	-/6 $\frac{3}{4}$	-/9 $\frac{1}{4}$	1/1	1/4 $\frac{1}{2}$	1/10	2/10	3/3	4/-	4/5	6/-	7/6
	Pieces, 12 to 23 $\frac{1}{2}$ ins. long .. each	-/10	-/11	1/1	1/5	1/11	2/8	3/4	4/9	8/-	10/6	13/6	15/6	24/-	32/6
	Pieces, 4 to 11 $\frac{1}{2}$ ins. long .. "	-/7	-/8	-/9	-/11	1/3	1/8	2/2	3/-	5/3	6/9	9/3	10/9	18/-	25/3
	Long Screws, 12 to 23 $\frac{1}{2}$ ins. long .. "	-/11	1/-	1/3	1/7	2/2	2/10	3/9	5/3	9/-	12/-	15/6	17/-	26/6	35/6
	Long Screws, 3 to 11 $\frac{1}{2}$ ins. long .. "	-/8	-/9	-/10	1/1	1/5	1/11	2/6	3/6	6/6	8/6	11/6	13/-	20/-	28/-
	Bends .. "	-/8	-/9	-/11	1/2	1/7 $\frac{1}{2}$	2/7 $\frac{1}{2}$	3/2	5/2	12/-	18/-	25/-	32/6	105/-	150/-
	Springs, not Socketed .. "	-/5	-/6	-/7	-/9	1/1 $\frac{1}{2}$	1/11 $\frac{1}{2}$	2/3 $\frac{1}{2}$	3/11	9/6	14/6	20/-	26/6	93/-	132/-
	Double or Barrel Nipples .. "	-/5	-/5	-/6	-/7	-/9	1/-	1/4	1/9	3/-	4/-	6/-	7/-	12/6	20/-
FITTINGS	Socket or Pipe Union .. each	2/-	2/6	3/-	4/-	5/6	6/9	8/-	10/-	17/6	22/6	27/6	35/-	66/-	105/-
	Elbows, Square .. "	-/10	-/11	1/1	1/3	1/6	2/2	2/7	4/3	9/6	14/-	22/-	28/-	95/-	150/-
	Elbows, Round .. "	-/11	1/-	1/2	1/5	1/8	2/4	2/10	4/8	10/6	16/-	24/-	30/-	95/-	150/-
	Tees .. "	1/-	1/1	1/3	1/7	1/10	2/6	3/1	5/1	11/6	18/-	26/-	32/-	98/-	155/-
	Crosses .. "	2/2	2/4	2/9	3/3	4/1	5/6	6/7	10/6	22/-	40/-	56/-	66/8	220/-	350/-
	Sockets, Plain .. "	-/3	-/3	-/4	-/5	-/6	-/8	-/10 $\frac{1}{2}$	1/3	2/6	3/6	5/-	6/-	12/-	18/-
	Sockets, Diminished .. "	-/4	-/5	-/6	-/7	-/9	1/-	1/4	2/-	5/-	7/-	9/-	11/-	35/-	55/-
	Flanges .. "	-/9	-/10	1/-	1/2	1/4	1/9	2/-	2/9	5/-	8/6	10/-	11/6	18/-	27/-
	Caps .. "	-/3 $\frac{1}{2}$	-/3 $\frac{1}{2}$	-/5	-/6	-/8	1/-	1/3	2/-	4/4	6/-	9/9	10/6	30/-	45/-
	Plugs .. "	-/3	-/3	-/4	-/5	-/6	-/8	-/10	1/3	2/6	4/9	7/-	10/-	30/-	48/-
	Backnuts .. "	-/2	-/2	-/3	-/3 $\frac{1}{2}$	-/5	-/6	-/8	1/1	2/3	3/6	4/6	5/6	18/-	26/-
	Nipples, Parallel .. "	-/2	-/2	-/3	-/3 $\frac{1}{2}$	-/4	-/6	-/8	1/-	2/3	3/6	4/6	5/6	18/-	26/-
	Union Bends .. "	2/6	3/-	3/9	5/-	6/3	8/6	10/-	13/6	27/-	37/-	49/-	58/-	100/-	160/-
	Close Taper Nipples .. each	-/2	-/2	-/3	-/3 $\frac{1}{2}$	-/4	-/6	-/8	1/-	2/3	3/6	4/6	5/6	18/-	26/-

Wrought Tubes in sizes 7 ins. and upwards—Special net prices on application.

# IDEAL "P" FITTINGS

## Instructions for Ordering

The British Standard method of reading sizes should be used as follows :



When ordering Reducing Fittings, and openings 1 and 2 are of the same size, specify the size once only, together with the sizes of the branches in the order indicated above.

Read Lateral Y Branches as Pitcher Tees.

# IDEAL “ P ” FITTINGS

Plain Malleable Iron—Black and Galvanised  
Individually tested to 300 lb.



P 1



P 2



P 3



P 4



P 10



P 5



P 8



P 11

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
*P 1	$-5\frac{1}{2}$	$-6\frac{1}{2}$	$-8\frac{1}{2}$	1/-	1/6	2/3	3/-	4/-	7/6	11/6	21/-
*P 2	$-6\frac{1}{2}$	-8	$-9\frac{1}{2}$	1/2	$1\frac{1}{7}\frac{1}{2}$	2/5	3/4	4/6	8/6	13/-	24/-
*P 3	$-9\frac{1}{2}$	$-11\frac{1}{2}$	1/2	$1\frac{1}{7}\frac{1}{2}$	2/3	2/11	4/3	5/10	10/-	15/-	27/6
P 4	$-3\frac{1}{2}$	-4	$-4\frac{1}{2}$	$-6\frac{1}{2}$	-8	1/1	$1\frac{1}{5}\frac{1}{2}$	2/2	3/6	5/8	9/8
P 5	-3	$-3\frac{1}{2}$	$-4\frac{1}{2}$	$-6\frac{1}{2}$	$-8\frac{1}{2}$	$1\frac{1}{11}\frac{1}{2}$	$1\frac{1}{7}\frac{1}{2}$	2/1	3/7	5/4	9/10
P 8	-4	$-4\frac{1}{2}$	$-5\frac{1}{2}$	$-7\frac{1}{2}$	-10	1/3	$1\frac{1}{8}\frac{1}{2}$	2/7	4/2	6/7	10/10
*P 10	$-9\frac{1}{2}$	$-11\frac{1}{2}$	$1\frac{1}{2}\frac{1}{2}$	1/9	2/6	3/10	5/3	6/10	—	—	—
*P 11	1/-	$1\frac{1}{2}\frac{1}{2}$	$1\frac{1}{5}\frac{1}{2}$	2/2	2/11	4/4	6/-	8/2	—	—	—

\* Supplied in equal sizes only.



## IDEAL "P" FITTINGS

Beaded Malleable Iron—Black and Galvanised  
Individually tested to 300 lb.



Size, ins.	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
P 20 ..	$-\frac{6}{2}$	$-\frac{6}{2}$	$-\frac{8}{2}$	$-\frac{9}{2}$	$1\frac{2}{2}$	$1\frac{8}{2}$	$2\frac{7}{8}$	$3\frac{6}{8}$	$5\frac{-}{8}$	$9\frac{-}{8}$	$14\frac{-}{8}$	$24\frac{-}{8}$
P 21 ..	$-\frac{8}{2}$	$-\frac{8}{2}$	$-\frac{9}{2}$	1/-	$1\frac{5}{8}$	2/-	$2\frac{10}{8}$	4/-	$5\frac{6}{8}$	10/-	16/-	$27\frac{6}{8}$
P 22 ..	—	1/-	$1\frac{2}{2}$	$1\frac{5}{8}$	2/-	$2\frac{10}{8}$	$3\frac{8}{8}$	$5\frac{3}{8}$	$7\frac{3}{8}$	12/-	$19\frac{3}{8}$	$33\frac{-}{8}$
P 23 ..	—	—	$-\frac{8}{2}$	$-\frac{9}{2}$	$1\frac{2}{2}$	$1\frac{8}{2}$	$2\frac{7}{8}$	$3\frac{6}{8}$	$5\frac{-}{8}$	$9\frac{-}{8}$	$14\frac{-}{8}$	$24\frac{-}{8}$
*P 24 ..	—	—	—	$1\frac{6}{8}$	$2\frac{1}{8}$	3/-	$4\frac{2}{8}$	6/-	$8\frac{6}{8}$	14/-	21/-	35/-

\* All sizes can be supplied with branch at 45°, 60° and 75°.



Size, ins.	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
P 25 ..	—	$-\frac{7}{2}$	$-\frac{9}{2}$	$-\frac{11}{2}$	$1\frac{4}{8}$	$1\frac{11}{8}$	$2\frac{10}{8}$	$3\frac{10}{8}$	$5\frac{6}{8}$	10/-	16/-	27/6
P 25A ..	—	—	—	$-\frac{11}{2}$	$1\frac{3}{8}$	$1\frac{11}{8}$	$2\frac{9}{8}$	$3\frac{9}{8}$	$5\frac{6}{8}$	—	—	—
P 26 ..	—	—	—	$2\frac{3}{8}$	$3\frac{1}{8}$	$4\frac{3}{8}$	$5\frac{6}{8}$	7/-	11/-	—	—	—
P 27 ..	—	$-\frac{5}{8}$	$-\frac{5}{2}$	$-\frac{7}{8}$	$-\frac{9}{8}$	1/-	$1\frac{6}{8}$	2/-	3/-	$4\frac{10}{8}$	$7\frac{9}{8}$	13/-
P 28 ..	—	—	—	$-\frac{9}{2}$	1/-	$1\frac{5}{8}$	$1\frac{10}{8}$	$2\frac{5}{8}$	$3\frac{3}{8}$	$5\frac{3}{8}$	$8\frac{6}{8}$	16/-
P 30 ..	$-\frac{4}{2}$	$-\frac{4}{2}$	$-\frac{5}{8}$	$-\frac{6}{8}$	$-\frac{8}{8}$	$-\frac{10}{2}$	$1\frac{1}{4}$	$1\frac{10}{8}$	$2\frac{8}{8}$	$4\frac{5}{8}$	7/-	12/-

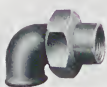


Size, ins.	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
P 31 ..	$-\frac{3}{8}$	$-\frac{3}{8}$	$-\frac{3}{2}$	$-\frac{5}{8}$	$-\frac{7}{2}$	$-\frac{9}{2}$	$1\frac{2}{2}$	$1\frac{10}{8}$	$2\frac{4}{8}$	4/-	6/-	11/-
P 32 ..	—	$-\frac{7}{8}$	$-\frac{8}{8}$	$-\frac{9}{2}$	1/-	$1\frac{5}{8}$	$2\frac{1}{2}$	$2\frac{11}{8}$	$4\frac{2}{2}$	—	—	—
*P 33 ..	—	—	—	$1\frac{6}{8}$	$1\frac{10}{8}$	$2\frac{6}{8}$	$3\frac{6}{8}$	$5\frac{6}{8}$	$7\frac{6}{8}$	12/-	19/-	31/9
P 35 ..	—	—	—	$1\frac{5}{8}$	$2\frac{2}{2}$	$2\frac{11}{8}$	$4\frac{5}{8}$	6/-	8/-	15/-	24/-	—
P 36 ..	—	—	—	$1\frac{9}{2}$	$2\frac{7}{2}$	$3\frac{7}{2}$	5/-	7/-	$9\frac{6}{8}$	18/-	26/-	—

\* Tongue Tees reducing on the run charged 2½% less gross discount.

# IDEAL " P " FITTINGS

Beaded Malleable Iron—Black and Galvanised  
Individually tested to 300 lb.



P70, P72 & P74



P71, P73 & P75



P90, P91 & P94



P92, P93 & P95

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
P 70	$1\frac{1}{8}\frac{1}{2}$	2/2	2/6	$\frac{3}{4}$	4/4	6/2	$\frac{8}{3}$	$\frac{11}{8}$	—	—	—
P 71	2/-	2/5	3/-	$\frac{3}{11}$	5/-	$\frac{6}{10}$	$\frac{9}{4}$	13/-	—	—	—
* P 72	2/2	2/8	3/-	4/-	$\frac{5}{3}$	$\frac{7}{5}$	10/-	14/-	—	—	—
* P 73	2/5	$\frac{2}{11}$	$\frac{3}{8}$	$\frac{4}{9}$	6/-	$\frac{8}{3}$	$\frac{11}{3}$	$\frac{15}{8}$	—	—	—
† P 74	$\frac{1}{11}$	2/6	$\frac{3}{2}$	$\frac{3}{9}$	5/-	$\frac{7}{6}$	10/-	$\frac{12}{6}$	—	—	—
† P 75	$\frac{1}{11}$	2/6	$\frac{3}{2}$	$\frac{3}{9}$	5/-	$\frac{7}{6}$	10/-	12/-	—	—	—
P 90	$1\frac{1}{7}\frac{1}{2}$	2/-	$\frac{2}{5}$	3/-	$\frac{3}{8}$	$\frac{4}{10}$	$\frac{6}{3}$	9/-	16/-	$\frac{26}{-}$	50/-
* P 91	2/2	$\frac{2}{5}$	$\frac{2}{11}$	$\frac{3}{8}$	$\frac{4}{5}$	$\frac{5}{10}$	$\frac{7}{10}$	11/-	$\frac{19}{6}$	$\frac{31}{6}$	—
* P 92	2/6	$\frac{2}{10}$	$\frac{3}{5}$	$\frac{4}{3}$	$\frac{5}{3}$	$\frac{6}{10}$	$\frac{9}{3}$	13/-	23/-	37/-	—
P 93	$\frac{1}{11}$	$\frac{2}{4}$	$\frac{2}{10}$	$\frac{3}{6}$	$\frac{4}{2}$	$\frac{5}{7}$	$\frac{7}{6}$	$\frac{10}{6}$	$\frac{18}{7}$	$\frac{30}{3}$	—
† P 94	$\frac{1}{3}$	$\frac{1}{8}$	$\frac{2}{1}$	$\frac{2}{6}$	$\frac{3}{4}$	5/-	$\frac{6}{8}$	$\frac{8}{4}$	$\frac{13}{4}$	20/-	$\frac{41}{8}$
† P 95	$\frac{1}{7}$	$\frac{2}{1}$	$\frac{2}{7}$	$\frac{3}{2}$	$\frac{4}{2}$	$\frac{6}{3}$	$\frac{8}{4}$	$\frac{10}{5}$	$\frac{16}{8}$	25/-	—

\* Ground seat.

† Brass to iron seats ; list prices in Galv. Finish on application.



P80



P80A



P80B



P81

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
P 80 ..	$-\frac{9}{2}\frac{1}{2}$	1/-	$1\frac{2}{1}\frac{1}{2}$	$1\frac{1}{8}\frac{1}{2}$	2/6	$\frac{3}{11}$	$\frac{5}{6}$	$\frac{8}{4}$	$\frac{15}{5}$	23/-	46/-
P 80A	$-\frac{8}{2}\frac{1}{2}$	$-\frac{11}{1}$	$\frac{1}{1}$	$\frac{1}{6}$	2/4	$\frac{3}{6}$	5/-	$\frac{7}{6}$	14/-	21/-	42/-
P 80B	$-\frac{7}{2}\frac{1}{2}$	$-\frac{9}{2}\frac{1}{2}$	1/-	$\frac{1}{5}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{4}{10}$	7/-	13/-	19/-	38/-
P 81 ..	—	—	$\frac{1}{10}$	$\frac{2}{11}$	$\frac{4}{4}$	6/-	$\frac{8}{6}$	12/-	23/-	38/-	60/-

# IDEAL " P " FITTINGS

Malleable Iron—Black and Galvanised  
Individually tested to 300 lb.



P82



P83



P84



P61

Size, ins.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
P 82 ..	1/6	2/5	3/7	5/-	7/-	10/-	19/-	32/-	55/-
P 83 ..	2/10	4/-	5/8	7/3	10/6	14/6	24/-	38/-	66/-
P 84 ..	-11	1/2 $\frac{1}{2}$	1/10	2/10	4/-	6/-	11/3	16/10	33/8
P 61 ..	1/6	2/5	3/6	5/-	6/5	11/-	17/-	24/-	66/8
Centres, ins.	1 $\frac{1}{2}$	2	2 $\frac{3}{8}$	3	3 $\frac{1}{2}$	*4	4 $\frac{1}{2}$	5	6

\* Can also be supplied at 6-in. centres, price 14/-.



P110



P112



P113



P114



P6



P115



P116

Size, ins.	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
P 110 ..	—	-4 $\frac{1}{2}$	-5	-6	-8	-11	1/5	1/10	2/9	4/6	7/-	12/-
P 112 ..	—	—	—	—	1/2 $\frac{1}{2}$	1/11	2/3 $\frac{1}{2}$	3/3 $\frac{1}{2}$	4/5	6/3	10/-	21/5
P 113 ..	—	—	-6	-7 $\frac{1}{2}$	-10	1/-	1/6	2/-	3/-	5/-	9/-	—
P 114† ..	-2 $\frac{1}{2}$	-2 $\frac{1}{2}$	-3 $\frac{1}{2}$	-4	-6	-8	1/-	1/5	1/11	3/4	5/-	9/-
P 115 ..	—	-5 $\frac{1}{2}$	-6	-7 $\frac{1}{2}$	-9 $\frac{1}{2}$	1/-	1/7 $\frac{1}{2}$	2/3	3/3	5/5	8/7	15/-
P 116 ..	—	-6	-6 $\frac{1}{2}$	-8	-11	1/1 $\frac{1}{2}$	1/10	2/5	3/6	5/10	9/6	16/6
P 6 ..	-2 $\frac{1}{2}$	-2 $\frac{1}{2}$	-3	-3 $\frac{1}{2}$	-4 $\frac{1}{2}$	-6	-7 $\frac{1}{2}$	-10 $\frac{1}{2}$	1/5 $\frac{1}{2}$	2/2	3/5	6/-

† Solid Plugs  $\frac{1}{2}$  in. and over charged at double list.

# IDEAL " P " FITTINGS

Malleable Iron Railing Fittings  
Black and Galvanised



P45



P46



P47



P52



P53



P48



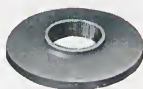
P49



P50

Size, ins.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
P 45 ..	$1\frac{1}{2}\frac{1}{2}$	$1\frac{1}{5}$	2/-	$3\frac{1}{5}$	4/-	6/-
P 46 ..	$1\frac{1}{5}$	$1\frac{1}{10}$	2/6	4/-	$5\frac{1}{8}$	$7\frac{1}{7}$
P 47 ..	$1\frac{1}{4}$	$1\frac{1}{6}$	2/3	$3\frac{1}{9}$	$4\frac{1}{8}$	$6\frac{1}{8}$
P 48 ..	$1\frac{1}{6}$	$1\frac{1}{11}$	3/-	$4\frac{1}{6}$	6/-	$7\frac{1}{10}$
P 49 ..	$1\frac{1}{6}$	$1\frac{1}{11}$	3/-	$4\frac{1}{6}$	6/-	$7\frac{1}{10}$
P 50 ..	$1\frac{1}{8}\frac{1}{2}$	$2\frac{1}{4}$	$3\frac{1}{4}$	5/-	$6\frac{1}{6}$	8/-
P 52 ..	$1\frac{1}{5}$	$1\frac{1}{10}$	2/6	3/-	4/-	$5\frac{1}{5}$
P 53 ..	$1\frac{1}{2}\frac{1}{2}$	$1\frac{1}{6}$	2/-	$2\frac{1}{6}$	4/-	5/-

## MALLEABLE IRON FLANGES



P 106

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
Diam., ins.	$2\frac{3}{8}$	$2\frac{15}{16}$	$3\frac{11}{32}$	$3\frac{15}{16}$	$4\frac{11}{32}$	$4\frac{29}{32}$	$5\frac{5}{16}$	$5\frac{29}{32}$	$6\frac{7}{8}$	$7\frac{15}{32}$	$8\frac{1}{2}$
Prices ..	1/-	$1\frac{1}{2}\frac{1}{2}$	1/5	2/-	2/3	2/10	3/6	4/6	7/-	9/-	12/6

# + GF + MALLEABLE IRON FITTINGS

Black and Galvanised Tested to 300 lb.



Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
Fig. 90 ..	-6 $\frac{1}{2}$	-8 $\frac{1}{2}$	-9 $\frac{1}{2}$	1/2 $\frac{3}{4}$	1/8 $\frac{1}{2}$	2/7 $\frac{1}{4}$	3/6	5/-	9/-	14/-	24/-
„ 92 ..	-7 $\frac{1}{4}$	-9 $\frac{1}{2}$	-10 $\frac{3}{4}$	1/3 $\frac{1}{2}$	1/10 $\frac{3}{4}$	2/9 $\frac{1}{2}$	3/9 $\frac{1}{2}$	5/6	10/-	16/-	27/6
„ 120 ..	-6 $\frac{1}{2}$	-8 $\frac{1}{2}$	-9 $\frac{1}{2}$	1/2 $\frac{3}{4}$	1/8 $\frac{1}{2}$	2/7 $\frac{1}{4}$	3/6	5/-	9/-	14/-	24/-



Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
Fig. 130 ..	-8 $\frac{1}{2}$	-9 $\frac{1}{2}$	1/-	1/4 $\frac{3}{4}$	2/-	2/9 $\frac{1}{2}$	4/-	5/6	10/-	16/-	27/6
„ *138 ..	—	—	—	1/9 $\frac{1}{2}$	2/6	3/6	5/6	7/6	12/-	19/-	—
„ 180 ..	1/-	1/2 $\frac{1}{2}$	1/4 $\frac{3}{4}$	2/-	2/9 $\frac{1}{2}$	3/7 $\frac{1}{4}$	5/2 $\frac{1}{2}$	7/2 $\frac{1}{2}$	12/-	19/2 $\frac{1}{2}$	33/-



Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
Fig. 240 ..	-4 $\frac{3}{4}$	-5 $\frac{1}{2}$	-6 $\frac{3}{4}$	-9	1/-	1/6	2/-	3/-	4/9 $\frac{1}{2}$	7/8 $\frac{1}{2}$	13/-
„ 260 ..	—	-7 $\frac{1}{4}$	-9 $\frac{1}{2}$	1/-	1/4 $\frac{3}{4}$	1/9 $\frac{1}{2}$	2/4 $\frac{3}{4}$	3/2 $\frac{1}{2}$	5/2 $\frac{1}{2}$	8/6	16/-
„ 270RH	-4 $\frac{3}{4}$	-4 $\frac{3}{4}$	-5 $\frac{3}{4}$	-7 $\frac{3}{4}$	-10 $\frac{1}{4}$	1/3 $\frac{1}{2}$	1/9 $\frac{1}{2}$	2/7 $\frac{1}{4}$	4/4 $\frac{3}{4}$	7/-	12/-
„ 271R&L	-4 $\frac{3}{4}$	-5 $\frac{1}{4}$	-6 $\frac{1}{2}$	-8 $\frac{3}{4}$	-11 $\frac{1}{2}$	1/4 $\frac{3}{4}$	2/-	2/10 $\frac{1}{4}$	4/10	7/8 $\frac{1}{2}$	13/2 $\frac{1}{2}$
„ 330 ..	1/7 $\frac{1}{4}$	2/-	2/4 $\frac{3}{4}$	3/-	3/7 $\frac{1}{4}$	4/9 $\frac{1}{2}$	6/4 $\frac{3}{4}$	9/-	16/-	26/-	50/-

Other patterns can be supplied if required.

\* The  $2\frac{1}{2}$ -in. and 3-in. sizes of Fig. 138 are made in reduced sizes only.  
In ordering, specify + GF + Fittings.



# + GF + MALLEABLE IRON FITTINGS

Black and Galvanised

Tested to 300 lb.



280



245



301



241



312



291

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
Fig. 241 ..	$-\frac{1}{4}\frac{1}{4}$	$-\frac{1}{4}\frac{3}{4}$	$-\frac{6}{6}$	$-\frac{8}{8}$	$-\frac{10}{10}\frac{3}{4}$	$1\frac{1}{4}\frac{3}{4}$	$1\frac{9}{9}\frac{1}{2}$	$2\frac{8}{8}\frac{1}{2}$	$4\frac{6}{6}$	$7\frac{-}{-}$	$12\frac{-}{-}$
„ 245 ..	$-\frac{5}{5}\frac{3}{4}$	$-\frac{6}{6}\frac{1}{2}$	$-\frac{7}{7}\frac{3}{4}$	$-\frac{10}{10}\frac{3}{4}$	$1\frac{1}{1}\frac{1}{4}$	$1\frac{9}{9}\frac{1}{2}$	$2\frac{4}{4}\frac{1}{2}$	$3\frac{6}{6}$	$5\frac{9}{9}\frac{1}{2}$	$9\frac{6}{6}$	$16\frac{6}{6}$
„ 280 ..	$-\frac{5}{5}\frac{1}{4}$	$-\frac{6}{6}$	$-\frac{7}{7}\frac{1}{4}$	$-\frac{9}{9}\frac{1}{2}$	$1\frac{-}{-}$	$1\frac{7}{7}\frac{1}{4}$	$2\frac{2}{2}\frac{1}{2}$	$3\frac{2}{2}\frac{1}{2}$	$5\frac{4}{4}\frac{3}{4}$	$8\frac{7}{7}\frac{1}{4}$	$15\frac{-}{-}$
„ 291 ..	$-\frac{2}{2}\frac{3}{4}$	$-\frac{3}{3}$	$-\frac{3}{3}\frac{3}{4}$	$-\frac{6}{6}$	$-\frac{8}{8}$	$1\frac{-}{-}$	$1\frac{4}{4}\frac{3}{4}$	$1\frac{10}{10}\frac{3}{4}$	$3\frac{3}{3}\frac{1}{2}$	$5\frac{-}{-}$	$9\frac{-}{-}$
„ 301 ..	$-\frac{3}{3}$	$-\frac{3}{3}\frac{1}{2}$	$-\frac{4}{4}\frac{3}{4}$	$-\frac{7}{7}\frac{1}{4}$	$-\frac{9}{9}\frac{1}{2}$	$1\frac{2}{2}\frac{1}{2}$	$1\frac{9}{9}\frac{1}{2}$	$2\frac{3}{3}\frac{1}{2}$	$4\frac{-}{-}$	$6\frac{-}{-}$	$11\frac{-}{-}$
„ 312 ..	$-\frac{2}{2}\frac{1}{2}$	$-\frac{3}{3}$	$-\frac{3}{3}\frac{1}{4}$	$-\frac{4}{4}\frac{1}{4}$	$-\frac{5}{5}\frac{3}{4}$	$-\frac{7}{7}\frac{3}{4}$	$-\frac{10}{10}\frac{1}{4}$	$1\frac{5}{5}\frac{1}{4}$	$2\frac{1}{1}\frac{1}{4}$	$3\frac{4}{4}\frac{3}{4}$	$6\frac{-}{-}$



1



2



131

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
Fig. 1 ..	$-\frac{8}{8}\frac{1}{2}$	$-\frac{10}{10}\frac{3}{4}$	$1\frac{1}{1}\frac{1}{4}$	$1\frac{6}{6}$	$2\frac{3}{3}\frac{1}{2}$	$3\frac{6}{6}$	$5\frac{-}{-}$	$7\frac{6}{6}$	$14\frac{-}{-}$	$21\frac{-}{-}$	$42\frac{-}{-}$
„ 2 ..	$-\frac{9}{9}\frac{1}{2}$	$1\frac{-}{-}$	$1\frac{2}{2}\frac{1}{2}$	$1\frac{8}{8}\frac{1}{2}$	$2\frac{6}{6}$	$3\frac{10}{10}\frac{3}{4}$	$5\frac{6}{6}$	$8\frac{3}{3}\frac{1}{2}$	$15\frac{4}{4}\frac{3}{4}$	$23\frac{-}{-}$	$46\frac{-}{-}$
„ 131 ..	$1\frac{1}{1}\frac{1}{4}$	$1\frac{2}{2}\frac{1}{2}$	$1\frac{6}{6}$	$2\frac{4}{4}\frac{3}{4}$	$3\frac{7}{7}\frac{1}{4}$	$5\frac{-}{-}$	$7\frac{-}{-}$	$10\frac{-}{-}$	$19\frac{-}{-}$	$32\frac{-}{-}$	$55\frac{-}{-}$

In ordering, specify + GF + Fittings.



# + GF + MALLEABLE IRON FITTINGS Black and Galvanised Tested to 300 lb.



Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4
Fig. 132..	$1/3\frac{1}{2}$	$1/4\frac{3}{4}$	$1/9\frac{1}{2}$	$2/10\frac{3}{4}$	$4/3\frac{1}{2}$	6/-	8/6	12/-	23/-	38/-	50/-	60/-
„ 181..	2/-	$2/4\frac{3}{4}$	$2/9\frac{1}{2}$	4/-	$5/7\frac{1}{4}$	$7/2\frac{1}{2}$	10/6	14/6	24/-	38/-	50/-	65/-



Wide Pattern Return Bends, Fig. 60

Size, ins.	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
Centres „	$1\frac{3}{16}$	$1\frac{9}{16}$	$1\frac{3}{4}$	2	$2\frac{3}{8}$	$3\frac{15}{16}$	$2\frac{3}{4}$
Fig. 60 ..	$1/1\frac{1}{4}$	$1/4\frac{3}{4}$	$1/9\frac{1}{2}$	$2/4\frac{3}{4}$	$3/4\frac{3}{4}$	5/-	$4/9\frac{1}{2}$

Size, ins.	2	$2\frac{1}{2}$	3	4
Centres „	$3\frac{9}{16}$	$4\frac{5}{16}$	$5\frac{7}{8}$	$7\frac{1}{16}$
Fig. 60 ..	$10/4\frac{3}{4}$	12/-	$12/9\frac{1}{2}$	50/-

Close and Medium Pattern Return Bends, Figs. 61 and 70

Size, ins.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3
Fig. 61 Centres..	$\frac{31}{32}$	$1\frac{3}{16}$	$1\frac{9}{16}$	$1\frac{7}{8}$	$2\frac{3}{32}$	$2\frac{9}{16}$	$3\frac{9}{32}$	$3\frac{25}{32}$
„ PRICES ..	$1/4\frac{3}{4}$	2/-	3/-	$4/4\frac{3}{4}$	$5/9\frac{1}{2}$	10/-	15/-	23/-
Fig. 70 Centres..	$1\frac{25}{32}$	$1\frac{31}{32}$	$2\frac{3}{8}$	$2\frac{3}{4}$	$3\frac{5}{32}$	$3\frac{17}{32}$	—	—
„ PRICES ..	1/6	$2/1\frac{1}{4}$	3/-	$4/4\frac{3}{4}$	$5/9\frac{1}{2}$	9/6	—	—

In ordering, specify + GF + Fittings.

# PIPE BRACKETS AND HANGERS

Malleable Iron



180



190



191



200



230



GIRDER LUG

Size, ins.		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1
Fig. 180	per gross	—	—	6/5	8/10	11/9
„ 190 Black	per doz.	1/11 $\frac{1}{2}$	2/0 $\frac{1}{2}$	2/5	2/7	3/4
„ 190 Galv.	„	2/3	2/4 $\frac{1}{2}$	2/10	3/-	3/11
„ 191 Black	„	2/1 $\frac{1}{2}$	2/3	2/4 $\frac{1}{2}$	2/9	3/4
„ 191 Galv.	„	2/5	2/6 $\frac{1}{2}$	2/10	3/1 $\frac{1}{2}$	3/11
„ 200 Black	„	—	2/6 $\frac{1}{2}$	2/9	3/1 $\frac{1}{2}$	3/9
„ 200 Galv.	„	—	3/0 $\frac{1}{2}$	3/3	3/9	4/6

Size, ins.		1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	4
Fig. 180	per gross	14/8	16/8	24/5	—	—	—
„ 190 Black	per doz.	4/7	6/1	8/10	11/8	15/7	21/6
„ 190 Galv.	„	5/6	7/2	10/6	14/-	18/8	25/8
„ 191 Black	„	4/8	6/1	8/10	11/9	15/6	20/10
„ 191 Galv.	„	5/6	7/3	10/6	14/-	18/9	24/11
„ 200 Black	„	4/10	6/2	9/-	10/7	14/8	23/6
„ 200 Galv.	„	5/9	7/4	10/8	—	—	—

Size, ins.		$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	4
Tapped	.. „	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$
Fig. 230	per doz.	2/5	2/7	2/7	2/11	3/3	3/5	4/3	4/11	8/4	9/9	15/7
Plates	„	2/11	2/11	2/11	2/11	2/11	2/11	3/5	3/5	4/6	4/6	4/6

Girder lugs : per pair 6d.

Bolts ( $\frac{1}{2}$ -in. diam.) : price according to length.

Tees for  $\frac{1}{2}$ -in. to 1 $\frac{1}{4}$ -in. No. 230A Pipe Hangers,  $\frac{3}{8} \times \frac{1}{4}$  in. } See Fig. P2,  
 „ 1 $\frac{1}{2}$ -in. and 2-in. No. 230A Pipe Hangers,  $\frac{3}{8}$  in. } page 206.  
 „ 2 $\frac{1}{2}$ -in. to 4-in. No. 230A Pipe Hangers,  $\frac{3}{8} \times \frac{1}{2}$  in. }

## FLOOR AND CEILING PLATES



SOLID BRASS CLIP-ON PATTERN.



### CAST IRON SET-SCREW PATTERN.

Size, ins.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
Brass ..	$-5\frac{1}{2}$	$-5\frac{1}{2}$	$-6\frac{1}{2}$	$-7\frac{1}{4}$	$-10\frac{1}{4}$	1-	$1\frac{1}{4}$	$1\frac{5}{4}$	2/2	$3\frac{1}{2}$
Chromium-plated ..	$-10\frac{1}{4}$	$-10\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{5}{4}$	$1\frac{3}{4}$	$1\frac{11}{2}$	2/5	3/5	4/10

Size, ins.	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4
C.I. Black ..	-4	-4	-4	-4 $\frac{1}{2}$	-5 $\frac{1}{2}$	-7	-8	-11	1/3	1/7
„ Nickel-plated ..	-10	-10	-10	-11	1/0 $\frac{1}{2}$	1/3	1/5	1/10	2/3	2/8
„ Chromium-plated ..	1/0 $\frac{1}{2}$	1/0 $\frac{1}{2}$	1/1	1/3	1/5	1/8	2/-	2/6	3/2	3/8

## PIPE SADDLES



Fig. 240



Fig. 241

2 to 3 in.



4 to 6 in.

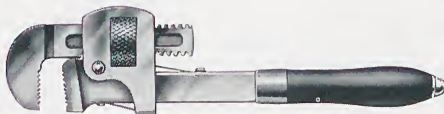
Size of Pipe .. ins.	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	4	5		6	
Tapped for Pipe ..	$\frac{1}{2}-\frac{3}{4}$	$\frac{1}{2}-1\frac{1}{2}$	$\frac{3}{4}-1\frac{1}{2}$	$\frac{1}{2}-2$	$\frac{1}{2}-2$	$\frac{3}{4}-2$	$2\frac{1}{2}-3$	$\frac{3}{4}-2$	$2\frac{1}{2}-4$
Fig. 240 .. each	4/11	5/5	6/10	6/10	8/2	14/11	27/8	14/11	31/2

Size of Pipe .. ins.	2		$2\frac{1}{2}$	3		4		
Tapped for Pipe ..	$\frac{1}{2}-1$	$1\frac{1}{4}-1\frac{1}{2}$	$\frac{3}{4}-1\frac{1}{2}$	$\frac{1}{2}-1$	$1\frac{1}{4}-2$	$\frac{1}{2}-1$	$1\frac{1}{4}-2$	$2\frac{1}{2}-3$
Fig. 241 .. each	2/7	2/9	3/2	3/2	3/10	3/10	4/6	10/3

## STILLSON PATTERN PIPE WRENCH



With Steel Handles, supplied in sizes 8, 10, 14, 18, 24, 36, 48 ins.



With Wood Handles, supplied in sizes 6, 8, 10, 14 ins.

Wrenches 8 ins. and above supplied with Steel Handles unless otherwise specified.

With Steel Handle			With Wooden Handle		
Length open	Pipe Sizes	PRICE Complete	Length open	Pipe Sizes	PRICE Complete
Ins.	Ins.	£ s. d.	Ins.	Ins.	s. d.
8	$\frac{1}{8}$ — $\frac{3}{4}$	9 3	6	$\frac{1}{8}$ — $\frac{1}{2}$	8 4
10	$\frac{1}{8}$ —1	12 0	8	$\frac{1}{8}$ — $\frac{3}{4}$	9 6
14	$\frac{1}{4}$ —1 $\frac{1}{2}$	16 0	10	$\frac{1}{8}$ —1	13 3
18	$\frac{1}{4}$ —2	1 3 0	14	$\frac{1}{4}$ —1 $\frac{1}{2}$	17 9
24	$\frac{1}{4}$ —2 $\frac{1}{2}$	1 19 6	—	—	—
36	$\frac{1}{4}$ —3 $\frac{1}{2}$	4 3 6	—	—	—
48	1—5	6 5 0	—	—	—

Spare Jaws, Frames, Handles and Nuts can be supplied.

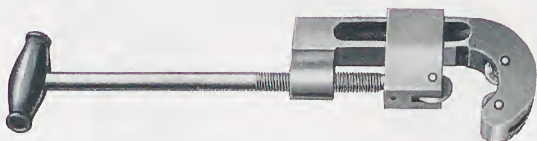
## CHAIN PIPE WRENCH



No.	30	31	32	33	33 $\frac{1}{2}$	34
For Pipe sizes ins.	$\frac{1}{8}$ to $\frac{3}{4}$	$\frac{1}{8}$ to 1 $\frac{1}{2}$	$\frac{1}{4}$ to 2 $\frac{1}{2}$	$\frac{3}{4}$ to 4	1 to 6	1 $\frac{1}{2}$ to 8
Extreme Length	14	20	27	37	44 $\frac{1}{2}$	50 $\frac{1}{2}$
PRICE .. .. each	21/—	29/—	41/6	58/6	75/—	91/6
Extra Chains .. ..	6/3	8/3	12/6	21/—	29/—	37/6
Extra Jaws per pair	8/3	14/6	23/—	33/3	39/6	45/9

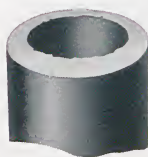
## BARNES' PATTERN PIPE CUTTERS

Fitted with Three Cutter Wheels



No.	Pipe Sizes	Approx. Weight	PRICE Complete			Extra Wheels Per doz.			Extra Pins Per doz.	
	Ins.	Lb.	£	s.	d.	£	s.	d.	s.	d.
1	$\frac{1}{8}$ -1	3	18	9		12	6		4	3
2	$\frac{1}{2}$ -2	5	1	5	0	15	0		4	3
3	$1\frac{1}{2}$ -3	$8\frac{1}{2}$	2	2	0	1	0	0	4	3
4	$2\frac{1}{2}$ -4	14	4	4	0	1	5	0	8	3
5	4-6	23	6	5	0	1	17	6	8	3
6	6-8	28	8	6	0	1	17	6	8	3

## IDEAL BURRING REAMERS



Before Reaming.



After Reaming.

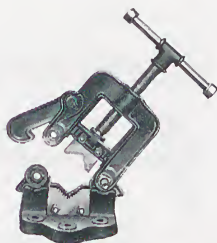
Now that the use of small sizes of pipe is so general, it is of the utmost importance that the full area should be available, as the internal area is frequently reduced 25 per cent. if the burr is not removed.

No. 1,  $\frac{1}{8}$  to  $\frac{1}{2}$ -in. pipe, 5s. 8d. ; No. 2,  $\frac{3}{8}$  to 1-in. pipe, 7s. 6d.

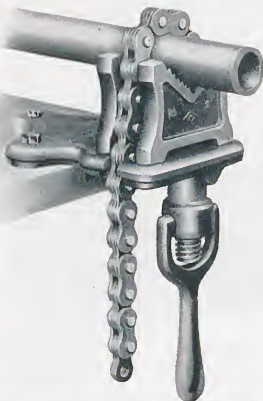
No. 2 $\frac{1}{2}$ ,  $\frac{1}{4}$  to  $1\frac{1}{4}$ -in. pipe, 8s. 9d. ; No. 4, 1 to 2-in. pipe, 17s. 6d.

# HINGED PIPE VICES

Malleable Iron



No.	Pipe Sizes	Approx. Weight	PRICE			Extra Jaws (Tool Steel)		
	Ins.		£	s.	d.	£	s.	d.
21½	⅛-1½	5	15	0		6	3	
22	⅛-2	8	17	9		7	6	
22½	⅛-2½	10	1	0	9	7	6	
23½	⅛-3½	18	1	11	3	10	6	
24½	⅛-4½	25	2	5	9	15	0	
26	⅛-6	40	4	18	0	1	5	0



## CHAIN PIPE VICE

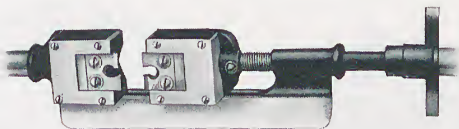
The Chain Pipe Vice embodies in compact and convenient form every requirement of a Pipe Fitter's Vice.

It is made of drop-forged steel, with carefully hardened and tempered jaws. The chains are made from high-tensile steel, and are tested and guaranteed.

No.	Capacity Size Pipe	Approx. Weight	PRICE Complete			Extra Chain with Screw			Extra Jaws Per pair		
	Ins.		£	s.	d.	£	s.	d.	£	s.	d.
1	⅛-2	4	1	9	0	10	6		12	6	
2	¼-4	10	3	2	6	1	0	0	1	9	3
3	½-6	18	5	12	6	1	17	6	2	10	0
4	¾-8	30	7	10	0	2	10	0	3	15	0



## BEAVER PIPE CUTTERS

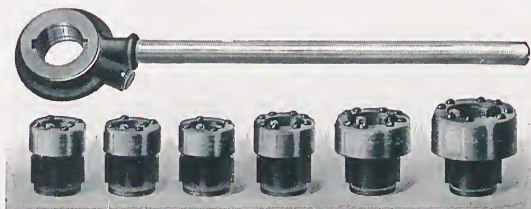


The Beaver Pipe Cutter is self-feeding and self-centring. Powerful springs press the cutters against the pipe, leaving no burr on outside or inside of pipe.

No. 5, for  $\frac{1}{2}$  to 2-in. pipe .. .. . £4 3s. 6d.

Extra Cutters per set, for No. 1, 5s. 0d. ; for No. 5, 6s. 3d.

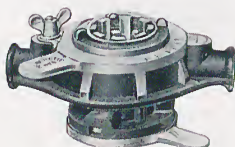
## BEAVER DIE PIPE STOCKS



With this Pipe Stock, separate dies and die heads are used for each size of pipe. The stock is operated by a ratchet action.

No.	Size Ins.	PRICE Complete			Extra Dies per Set	
		£	s.	d.	s.	d.
3	$\frac{1}{8}$ -1	5	0	0	10	6
	$\frac{1}{4}$ -1	4	7	6	10	6
	$\frac{3}{8}$ -1	3	15	0	10	6

Extra Die Heads, with Dies, each— $\frac{1}{8}$ ,  $\frac{1}{4}$ , or  $\frac{3}{8}$ -in., 12s. 6d. ;  $\frac{1}{2}$  or  $\frac{3}{4}$ -in., 14s. 6d. ; 1-in., 16s. 9d.

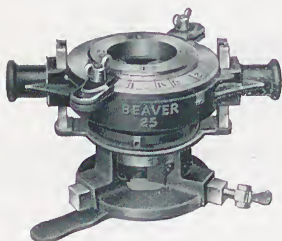


This Pipe Stock is fitted with two sets of dies, which are always in the stock and are set to size by a single cam, or may be set to cut over or under standard size.

No.	Range Ins.	Will Thread Pipe Sizes Ins.	PRICE Complete			Extra Dies Per Set	
			£	s.	d.	s.	d.
6	$\frac{1}{4}$ to $\frac{3}{4}$	$\frac{1}{4}$ , $\frac{3}{8}$ , $\frac{1}{2}$ , $\frac{3}{4}$	3	2	6	*12	6

\* For either  $\frac{1}{4}$  and  $\frac{3}{8}$  or  $\frac{1}{2}$  and  $\frac{3}{4}$ -in. Dies ; state which required.

# BEAVER DIE PIPE STOCKS

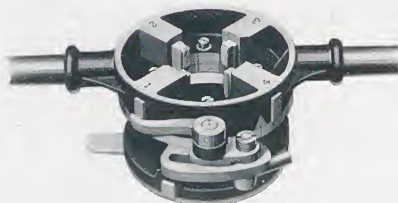


No. 25

These Die Stocks are fitted with narrow receding dies, and by the application of a simple mechanical principle, the dies automatically recede as the thread is cut, giving the necessary taper.

No.	Pipe Sizes Ins.	PRICE Complete			Extra Dies Per Set*		
		£	s.	d.	£	s.	d.
25	1, 1 $\frac{1}{4}$ , 1 $\frac{1}{2}$ , 2	6	5	0	14	9	
†26	1, 1 $\frac{1}{4}$ , 1 $\frac{1}{2}$ , 2	7	6	0	14	9	
†31	1, 1 $\frac{1}{4}$ , 1 $\frac{1}{2}$ , 2, 2 $\frac{1}{2}$ , 3	14	12	0	1	17	6
†41	2 $\frac{1}{2}$ , 3, 3 $\frac{1}{2}$ , 4	23	0	0	1	17	6

\* One Set of Dies only is required with each Stock, except No. 31, which has two sets (1-2 ins. and 2 $\frac{1}{2}$ -3 ins.).  
† With Ratchet.

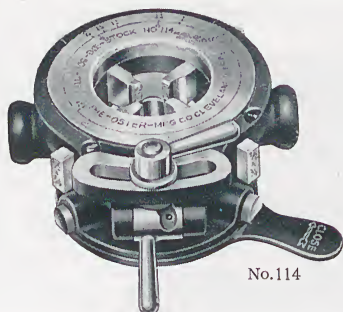


These Stocks are of improved construction, the die adjusting cam being underneath the dies. There is ample clearance for chips to fall away, preventing injury to threads.

No.	Range Ins.	Number of Sets of Dies	PRICE Complete			Extra Dies Per Single Set	
			£	s.	d.	s.	d.
70	$\frac{1}{4}$ to 1 $\frac{1}{4}$	3	4	11	6	14	6
72	1 „ 2	2	5	0	0	16	6
†73	1 „ 2	2	6	5	0	16	6
74	$\frac{1}{2}$ „ 2	3	5	16	6	16	6
†75	$\frac{1}{2}$ „ 2	3	7	1	6	16	6

† With Ratchet.

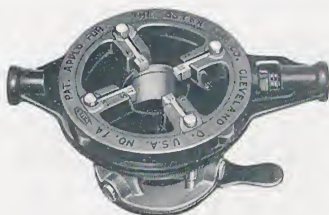
# OSTER DIE PIPE STOCKS



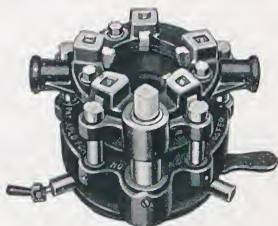
No. 114

These Stocks are fully adjustable, and are controlled by two levers, one for locking them in position to cut duplicate threads, and the other for opening and closing the dies. The universal chuck accurately centres all sizes.

Range	Number of Sets of Dies	PRICES										
		PLAIN PATTERN			RATCHET PATTERN			Extra Dies per Single Set				
		No.	£	s.	d.	No.	£	s.	d.	£	s.	d.
$\frac{1}{4}$ — $\frac{3}{4}$	2	111	3	10	10	—	—	—	—	12	6	
$\frac{1}{4}$ — $1\frac{1}{4}$	3	112	4	11	8	112R	5	16	8	14	7	
1—2	2	113	5	0	0	113R	6	5	0	16	8	
$\frac{1}{2}$ —2	3	114	5	16	8	114R	7	1	8	16	8	
$\frac{1}{4}$ —2	4	114 $\frac{1}{2}$	6	13	4	114 $\frac{1}{2}$ R	7	18	4	16	8	
$1\frac{1}{2}$ —3	2	115	8	15	0	115R	12	10	0	1	9	2
1—3	3	115 $\frac{1}{2}$	10	4	2	115 $\frac{1}{2}$ R	13	19	2	1	9	2
$2\frac{1}{4}$ —4	2	117	10	8	4	117R	14	11	8	1	13	4
$1\frac{1}{2}$ —4	3	117 $\frac{1}{2}$	12	1	8	117 $\frac{1}{2}$ R	16	5	0	1	13	4



No. 1A  
Fitted with narrow easy cutting dies.



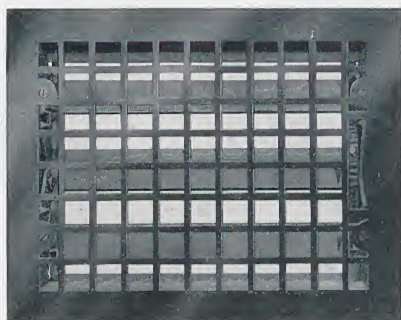
No. 44  
Fitted with leader screw.

No.	Range	Number of Sets of Dies	PRICE Complete			Extra Dies per Single Set	
	Ins.		£	s.	d.	s.	d.
1 Plain	1 - 2	4	4	0	0	6	3
1A Ratchet	1 - 2	4	5	0	0	6	3
*44	$2\frac{1}{2}$ - 4	4	20	16	8	33	4

\* Geared Ratchet.

# REGISTERS

## Plain Lattice Design



### Complete Registers

Size of Opening Ins.	Japanned	Size of Opening Ins.	Japanned	Size of Opening Ins.	Japanned
	Black s. d.		Black s. d.		Black s. d.
6 × 8	7 5	9 × 9	9 8	10 × 18	19 3
6 × 9	7 10	9 × 12	10 7	12 × 12	15 2
6 × 10	7 10	9 × 14	10 7	12 × 14	15 7
6 × 12	9 3	9 × 18	14 3	12 × 18	20 8
6 × 14	11 11	10 × 12	11 6	14 × 18	25 9
6 × 18	14 8	10 × 14	12 5	16 × 18	34 8
8 × 12	10 8	10 × 16	15 7	18 × 24	47 8

*All above sizes kept in stock.*

### Faces only

Size of Opening Ins.	Japanned	Size of Opening Ins.	Japanned	Size of Opening Ins.	Japanned
	Black s. d.		Black s. d.		Black s. d.
6 × 8	3 7	9 × 9	4 2	10 × 18	7 3
6 × 9	3 8	9 × 12	5 2	12 × 12	6 5
6 × 10	4 0	9 × 14	5 10	12 × 14	6 11
6 × 12	4 6	9 × 18	6 5	12 × 18	7 10
6 × 14	4 11	10 × 12	6 1	14 × 18	14 3
6 × 18	5 6	10 × 14	6 5	16 × 18	15 2
8 × 12	5 6	10 × 16	6 11	18 × 24	16 6

White Enamelled Registers and Faces, 10d. each extra.

Extra for registers drilled 4 holes for screws, 4½d. per register.

Pulleys for Registers, per pair 1/-.

Indicator Handles, black japanned, lettered "Open" and "Shut,"  
per pair 11d.

Registers can also be supplied with brass faces. Prices on  
application. Dimensions, page 224.

## IDEAL REGULATING QUADRANT

This Quadrant is made specially for operating Ventilating Registers behind radiators, or in connection with Inlet or Exhaust Flues, and can be fixed in any position or at any angle.

In ordering, state whether for use on right- or left-hand side when facing register and if on right- or left-hand side of connecting rod.

### PRICE

Black, Malleable Iron 3/-

Brass, Polished .. 8/-

Brass, Nickel-plated 9/-

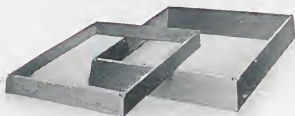
Brass, Chromium-plated .. .. 10/3

Brass Connecting Rods, 3 ft. long .. 1/3



Register with Regulating Quadrant in window recess.

## CAST IRON WALL FRAMES



Cast Iron Wall Frames can be solidly masoned into the brick-work, and the Registers, being attached by screws, are removable at any time without injury to the walls.

To Fit Register Ins.	PRICE each s. d.	To Fit Register Ins.	PRICE each s. d.	To Fit Register Ins.	PRICE each s. d.
6 × 8	3 1	9 × 9	4 5	10 × 18	7 10
6 × 9	3 8	9 × 12	4 7	12 × 12	7 2
6 × 10	3 8	9 × 14	5 9	12 × 14	8 3
6 × 12	3 9	9 × 18	7 2	12 × 18	8 6
6 × 14	4 5	10 × 12	5 5	14 × 18	13 5
6 × 18	5 5	10 × 14	5 9	16 × 18	17 1
8 × 12	4 5	10 × 16	6 5	18 × 24	21 6

Sizes up to and including 12 × 18 ins. are 2 ins. deep ;  
larger sizes, 4 ins. deep.

*Prices of other sizes on application.*



# DETACHABLE WALL GRATINGS AND FRAMES



School Board Pattern with  
four brass screws

These Gratings and Frames  
are of cast iron.

The face can be detached  
from the body by removing the  
brass set-screws.

Size Ins.	PRICES		Size Ins.	PRICES	
	Black s. d.	Galvanised s. d.		Black s. d.	Galvanised s. d.
4½ × 9	3 7	5 2	9 × 18	7 4	11 10
6 × 9	3 8	5 6	12 × 12	6 4	9 9
6 × 12	4 6	6 9	12 × 18	8 7	14 1
9 × 9	4 2	6 4	14 × 14	8 3	13 7
9 × 12	5 1	7 8	15 × 15	8 9	14 7
9 × 14	6 0	9 5	18 × 18	11 0	18 4

## REGISTERS

Capacities and Dimensions in Inches

Size of Body	Net Air Opening Sq. ins.	REGISTER Extreme Size of Face	Depth Open	Wall Opening
6 × 8	32	7 11/16 × 9 11/16	2 3/8	6 9/16 × 8 9/16
6 × 9	36	7 11/16 × 10 11/16	2 3/8	6 9/16 × 9 9/16
6 × 10	40	7 11/16 × 11 11/16	2 3/8	6 9/16 × 10 9/16
6 × 12	48	7 11/16 × 13 3/32	2 3/8	6 9/16 × 12 9/16
6 × 14	56	7 11/16 × 15 11/16	2 3/8	6 9/16 × 14 9/16
6 × 18	72	7 11/16 × 19 11/16	2 3/8	6 9/16 × 18 9/16
8 × 12	64	9 3/4 × 13 3/4	3	8 5/8 × 12 5/8
9 × 9	54	10 7/8 × 10 7/8	3 1/4	9 11/16 × 9 11/16
9 × 12	72	10 7/8 × 13 7/8	3 1/4	9 11/16 × 12 11/16
9 × 14	84	10 7/8 × 15 7/8	3 1/4	9 11/16 × 14 11/16
9 × 18	108	10 7/8 × 19 7/8	3 1/4	9 11/16 × 18 11/16
10 × 12	80	11 15/16 × 13 15/16	3 3/8	10 11/16 × 12 11/16
10 × 14	94	11 15/16 × 15 15/16	3 3/8	10 11/16 × 14 11/16
10 × 16	107	11 15/16 × 17 7/8	3 3/8	10 11/16 × 16 11/16
10 × 18	120	11 15/16 × 19 7/8	3 3/8	10 11/16 × 18 11/16
12 × 12	96	14 1/16 × 14 1/16	4	12 3/4 × 12 3/4
12 × 14	112	14 1/16 × 16 1/16	4	12 3/4 × 14 3/4
12 × 18	144	14 1/16 × 20	4	12 3/4 × 18 3/4
14 × 18	168	16 1/4 × 20 5/16	4	14 7/8 × 18 7/8
16 × 18	192	18 5/16 × 20 5/16	4 1/4	16 7/8 × 18 7/8
18 × 24	288	20 5/16 × 26 5/16	4 3/4	18 7/8 × 24 7/8



## TELEGRAPH CODE

Telegraphic Address: "RADIATORS, HULL"

## QUOTATIONS AND CORRESPONDENCE

	CODE	WORD
Answer by first Post . . . . .	.. .. .	Quagmire
At what price and how soon can you furnish . . . . .	.. .. .	Quackery
Send us loose sheets showing --- Radiator . . . . .	.. .. .	Quotient
Quote best price on . . . . .	.. .. .	Quadrate
Referring to your telegram of . . . . .	.. .. .	Quakerism
,,     ,,     letter of . . . . .	.. .. .	Qualify
,,     to our telegram of . . . . .	.. .. .	Quandary
,,     ,,     letter of . . . . .	.. .. .	Quarried
See our letter of --- giving full particulars . . . . .	.. .. .	Quaintly
Will wire you to-morrow morning . . . . .	.. .. .	Quaffed
Wire reply . . . . .	.. .. .	Quadroom

## ORDERS AND FORWARDING

Add to our order (No. or date and your Ack. No.)	..	..	..	..	..	Fabricate
Change our order of (No. or date to read and your Ack. No.)	..	..	..	..	..	Fabulous
Enter order as per our inquiry of	..	..	..	..	..	Fabaceous
"    "    your quotation of	..	..	..	..	..	Fabliaux
Forward by Parcel Post	..	..	..	..	..	Facetious
"    "    Goods train	..	..	..	..	..	Factotum
"    "    Passenger train	..	..	..	..	..	Faintness
"    "    Steamer	..	..	..	..	..	Falconry
"    "    immediately	..	..	..	..	..	Fallible
Hold for instructions our order (No. or date and your Ack. No.)	..	..	..	..	..	Falsetto
"    our order (No. and your Ack. No.) until (date)	..	..	..	..	..	Fattiness
How soon can you forward	..	..	..	..	..	Familiar
Omit from our order (No. or date and your Ack. No.)	..	..	..	..	..	Fameless
Prepare for immediate despatch	..	..	..	..	..	Fantasia
Referring to your letter of (date) your order (No.) was despatched	..	..	..	..	..	Feculent
"    "    telegram	"	"	"	"	..	Ferreter
"    "    letter	"	"	will be	"	..	Feelingly
"    "    telegram	"	"	"	"	..	Felucca
"    "    "    to-day we can ship by steamer this week	..	..	..	..	..	Favourless
"    "    "    "    "    "    next	"	"	"	"	..	Fearless
"    "    "    yesterday	"	"	"	this	..	Fawner
"    "    "    "    "    "    next	"	"	"	"	..	Feathery
Trace our order (No. or date and your Ack. No.)	..	..	..	..	..	Famished
When and by what route did you forward our order (No. or date)	..	..	..	..	..	Fallow
When will our order (No. or date and your Ack. No.) be forwarded	..	..	..	..	..	Fanatical
Will send forwarding instructions by Post	..	..	..	..	..	Fascinate
You may substitute on our order (No. or date)	..	..	..	..	..	Fascicle
Will forward your order (No. or date) on	..	..	..	..	..	Febrile

## RADIATORS

## HEIGHTS

CODE WORD		CODE WORD		CODE WORD	
12 in. high	Hosiery	22 in. high	Hirsute	30 in. high ..	.. Herbal
13    ,,	Hiatus	24    ,,	Heathy	36    ,, ..	.. Higgler
18    ,,	Highland				

# TELEGRAPH CODE

## RADIATORS—continued

### NUMBER OF SECTIONS

CODE WORD		CODE WORD		CODE WORD	
2 sections	Scabrous	15 sections	Scoffing	28 sections	Scholar
3 "	Scaffold	16 "	Scooped	29 "	Scornful
4 "	Scalding	17 "	Scorched	30 "	Scorpion
5 "	Scallop	18 "	Scathless	31 "	Scoundrel
6 "	Scamper	19 "	Scatters	32 "	Scraggy
7 "	Scantily	20 "	Scenery	Intermediate Sec'n	Scrivener
8 "	Scarcity	21 "	Scenical	Middle Leg	Scrutiny
9 "	Scarlet	22 "	Scentless	Return Leg	Scripture
10 "	Schooner	23 "	Sceptical	" " "	"
11 "	Sciagraph	24 "	Sceptre	" without feet	Sculler
12 "	Sciatica	25 "	Schedule	Supply Leg Section	Scribble
13 "	Scientist	26 "	Schemer	" " "	"
14 "	Scissors	27 "	Schisms	" without feet	Scruple

### TAPPING INSTRUCTIONS

CODE WORD		CODE WORD		CODE WORD	
Tapped Regular	Target	1 in. . .	.. Tabular	$1 \times \frac{1}{2}$ in. . .	.. Tabard
Hot Water	.. Talent	$\frac{3}{4}$ " " . .	.. Taboret	$\frac{3}{4} \times \frac{1}{2}$ " " . .	.. Tabled
One Pipe Steam	.. Talk	1 " " . .	.. Tackle	$1 \times \frac{1}{2}$ " " . .	.. Tabooed
Two Pipe Steam	.. Tamarind	$1\frac{1}{2}$ " " . .	.. Tatter	$1 \times \frac{3}{4}$ " " . .	.. Taciturn
Open Return		$1\frac{1}{2}$ " " . .	.. Tailor	$1\frac{1}{4} \times \frac{3}{4}$ " " . .	.. Taffrail
(Steam)	.. Tamper	2 " " . .	.. Taint	$1\frac{1}{4} \times 1$ " " . .	.. Taurine
$\frac{3}{8}$ in. . .	.. Teaboard	$\frac{1}{2} \times \frac{3}{8}$ in. . .	.. Taking	$1\frac{1}{2} \times 1$ " " . .	.. Talmud
				CODE WORD	
Tapped top supply and bottom return on opposite ends				..	.. Timbrel
" " left-hand	" " " " same end	..	..	..	.. Tillage
" " right-hand	..	..	..	..	.. Ticklish
With eccentric bushings	..	..	..	..	.. Tibial
	..	..	..	..	.. Titanic

### STYLE AND KIND OF RADIATORS

Excelsior Heater, Steam	..	..	..	..	..	..	Rageful
" " " Water	..	..	..	..	..	..	Rainbow
Ideal Classic Wall, Steam	..	..	..	..	..	..	Refresh
" " " Water	..	..	..	..	..	..	Refugee
" " Electric, 1,000 Watts, No. 4 Neo-Classic	(State No. of sections and Height)	..	..	..	..	..	Relish
" " " 1,500 " " "	( " " )	..	..	..	..	..	Reluctant
" " " 2,000 " " "	( " " )	..	..	..	..	..	Relume
" " Neo-Classic No. 2, Steam	..	..	..	..	..	..	Regius
" " " Water	..	..	..	..	..	..	Regnal
" " " No. 4, Steam	..	..	..	..	..	..	Regorge
" " " Water	..	..	..	..	..	..	Regulus
" " " No. 6, Steam	..	..	..	..	..	..	Reharse
" " " Water	..	..	..	..	..	..	Reignite
" " Neo-Classic Window, Steam	..	..	..	..	..	..	Relapse
" " " Water	..	..	..	..	..	..	Relative
" " Neo-Hospital, Steam (state width)	..	..	..	..	..	..	Relegate
" " " Water	..	..	..	..	..	..	Reliable
" " Marine Bulkhead	..	..	..	..	..	..	Rebuff
" " Plain Wall 13-in. Steam	..	..	..	..	..	..	Ravelin
" " " Water	..	..	..	..	..	..	Ravenous
" " " 22-in. Steam	..	..	..	..	..	..	Rawboned
" " " Water	..	..	..	..	..	..	Razorbill
" " Rayrad, No. 15	..	..	..	..	..	..	Reformed
" " " No. 24	..	..	..	..	..	..	Regicide
" " " No. 35	..	..	..	..	..	..	Rejoice
" " " No. 36	..	..	..	..	..	..	Relict
" " " No. 36A	..	..	..	..	..	..	Reliquary
Vento Heaters, 40-in. Regular, Steam	..	..	..	..	..	..	Rebellow
" " " " Water	..	..	..	..	..	..	Reblossom

# TELEGRAPH CODE

## RADIATORS—continued

### MISCELLANEOUS

### CODE WORD

Astro Hinge Fittings, Set of, for 36-in. Neo-Hospital Radiator (width)	..	Modal
" " " " 30-in. " " " "	..	Modena
" " " " 24-in. " " " "	..	Modest
Back Plates for Marine Radiators	..	Mickle
Baffle Plates	..	Madragora
Bronze Powder --- pounds of	..	Malestrom
Bronzing Liquid --- No. 1 tins of	..	Magician
" " --- " 2 " " " " " "	..	Magistrate
" " --- " 3 " " " " " "	..	Magellanic
" " --- " 4 " " " " " "	..	Maggot

Bushings—	CODE WORD		CODE WORD		CODE WORD
$\frac{3}{4} \times \frac{1}{2}$ -in.	Mignon	$1\frac{1}{2} \times 1\frac{1}{2}$ -in.	Magism	$2 \times \frac{3}{4}$ -in.	Mahogany
$\frac{1}{4} \times \frac{1}{8}$ "	Milfoil	$1\frac{1}{2} \times 1$ "	Magma	$2 \times \frac{1}{2}$ "	Meander
$1 \times \frac{3}{4}$ "	Minify	$1\frac{1}{2} \times \frac{3}{4}$ "	Magnanerie	$2\frac{1}{2} \times 2$ "	Millenary
$1 \times \frac{1}{2}$ "	Minion	$1\frac{1}{2} \times \frac{1}{2}$ "	Magnesite	$2\frac{1}{2} \times 1\frac{1}{2}$ "	Mimicking
$1\frac{1}{4} \times 1$ "	Mignonette	$2 \times 1\frac{1}{2}$ "	Magnate	$2\frac{1}{2} \times 1\frac{1}{4}$ "	Minacious
$1\frac{1}{4} \times \frac{3}{4}$ "	Migrate	$2 \times 1\frac{1}{8}$ "	Magnetic	$2\frac{1}{2} \times 1$ "	Minaret
$1\frac{1}{4} \times \frac{1}{2}$ "	Milkiness	$2 \times 1$ "	Magnolia	$2\frac{1}{2} \times \frac{3}{4}$ "	Mingler

				CODE WORD
Bushings, Eccentric	..	..	..	Mahometan
Classic Wall Radiator Brackets, Adjustable, Fig. 2	..	..	..	Miscall
" " " " Type "C"	..	..	..	Mirthful
" " " " Fixed, Fig. 3	..	..	..	Mistily
Dampers, Floor	..	..	..	Malicious
Enamel --- gallon cans of	..	..	..	Malignant
" --- half-gallon cans of	..	..	..	Maltreat
" --- quarter-gallon cans of	..	..	..	Malcontent
High Legs to give --- centres	..	..	..	Modiolus
Indirect Radiator Heater, No. 1	..	..	..	Moisture
" " " " No. 2	..	..	..	Molasses
Nipples, $2\frac{1}{2}$ -in., right- and left-hand threaded	..	..	..	Minstrel
" 2 " " " " " " " "	..	..	..	Manacle
" $1\frac{1}{2}$ " " " " " " " "	..	..	..	Mandarin
" $1\frac{1}{4}$ " " " " " " " "	..	..	..	Minikin
" 2 " " " " " " " "	..	..	..	Mandatory
" 2 " " " " " " " "	..	..	..	Manhood
" $2\frac{1}{4}$ " " " " " " " "	..	..	..	Manifesto
Pedestals --- inches high	..	..	..	Manifold
" " " " to make distance from floor to centre of supply tapping - ins.	..	..	..	Mankind
Plain Wall Radiator Brackets, No. 10	..	..	..	Mistletoe
" " " " " " No. 11	..	..	..	Mistress
" " " " " " No. 12	..	..	..	Mitre
Plugs, 2-in.	..	..	..	Mannerism
" $1\frac{1}{2}$ " " " " " " " "	..	..	..	Manœuvre
" $1\frac{1}{4}$ " " " " " " " "	..	..	..	Mintage
" 1 " " " " " " " "	..	..	..	Moiety
" $\frac{1}{8}$ " " " " " " " "	..	..	..	Marauder
Priming Paint—gallon cans of	..	..	..	Meltingly
" " " " half-gallon cans of	..	..	..	Membered
" " " " quarter-gallon cans of	..	..	..	Memorize
Rayrad Brackets	..	..	..	Mitten
Regulating Quadrants	..	..	..	Marasite
Saddles, Radiator	..	..	..	Marjoram
" " " " Ideal Improved Adjustable	..	..	..	Mightily
Tops (Steel) for (Type of Ideal Radiator and No. of Section)	..	..	..	Mittlesome
Towel Rails, Chromium-plated, 18 gauge (No. and size)	..	..	..	Mizzen
" " " " Chromium-plated, 16 gauge (No. and size)	..	..	..	Miurus
" " " " Square Tube, Chromium-plated (No. and size)	..	..	..	Mobile
" " " " Hexagonal Tube, Chromium-plated (No. and size)	..	..	..	Mockery

# TELEGRAPH CODE

## RADIATORS—continued

MISCELLANEOUS						CODE WORD
Wall Brackets, Ideal Improved Adjustable	..	..	..	..	..	Microcosm
„ „ Top	..	..	..	..	..	Meniver
„ „ Bottom	..	..	..	..	..	Menology
„ Gratings and Frames (Detachable)	..	..	..	..	..	Marrow
„ Stays for (Type of Radiator)	..	..	..	..	..	Modulate
Without Feet	..	..	..	..	..	Minx
Wrench No. 1, 1-in. for Neo-Classic and Neo-Hospital Radiators	..	..	..	..	..	Mofussil
„ „ 1 „ Ideal Rayrad	..	..	..	..	..	Mistine
„ „ 1 „ Classic Wall Radiators	..	..	..	..	..	Misname
„ „ 1½ „ Plain	..	..	..	..	..	Misrule
„ „ 1½ „ Neo-Classic and Neo-Hospital Radiators	..	..	..	..	..	Mohair
„ No. 2, 1½-in. for Excelsior Radiators	..	..	..	..	..	Mature
„ „ 2½ „ Vento Heaters	..	..	..	..	..	Miasma
„ No. 3, for Classic Wall..	..	..	..	..	..	Missive
„ „ „ Neo-Classic and Neo-Hospital	..	..	..	..	..	Moider

## BOILERS

### IDEAL COOKANHEAT

No.	CODE WORD	No.	CODE WORD
20 Painted Black, with edges polished and plated	Chairman	With oven on left-hand side	Chancel
Do. Enamelled (colour)	Challenge	„ boiler made rustless	Chancery
21 Painted Black, with edges polished and plated	Chaise	„ Gas Cooking attachment	Chandler
Do. Enamelled (colour)	Chamelot	10 Ideal Indirect Cylinder	Centrose
30 (State colour)	Chamois	11 „ „ „	Century
34 „ „ „	Chanson	12 „ „ „	Ceratin
With oven door hinged on left-hand side	Chaldron	0C „ „ „	Chamfer
		1C „ „ „	Centaur
		2C „ „ „	Centipede
		40 Galv. Storage Cylinder	Celebrity

### DOMESTIC GAS

No.	CODE WORD	No.	CODE WORD
1-DG	Demolish	2-DG	Dempster

### DOMESTIC

No.	CODE WORD	No.	CODE WORD	No.	CODE WORD	No.	CODE WORD
0-DA	Demure	2A	Delve	HW-20	Demerit	HW-4	Delgate
00	Defraud	4D	Decagon	HW-30	Demesne	HW-5	Delicious
0	Defender	5D	Decamp	HW-40	Demigod	HW-6	Delight
01	Defiance	6D	Decay	HW-50	Demise	HW-7	Delilah
02A	Delusion	14D	Dauphin	HW-60	Democrat	HW-8	Delphian
1	Deanery	15D	Dazzling	HW-3	Degrade		

To indicate Sectional Domestic Boilers for Oil Burning, add the word "Oil" to above code ; thus No. HWO-40 will be "Demigod Oil," HWO-3 "Degrade Oil," etc. The codes for the Oil Burning Boilers not covered by above Nos. are, HWO-70 "Demon Oil," HWO-80 "Demotic Oil," HWO-9 "Delta Oil," and HWO-10 "Deluge Oil."

### NEO-CLASSIC

No.	CODE WORD	No.	CODE WORD	No.	CODE WORD	No.	CODE WORD
NC031	Cloister	NC071	Clough	NC61	Clown	NC62	Clinch
NC041	Closure	NC31	Cleavers	NC71	Clevis	NC72	Clinic
NC051	Clothier	NC41	Clematis	NC42	Clicker	NC82	Clique
NC061	Cloud	NC51	Clerical	NC52	Climate	NC92	Clipper

# TELEGRAPH CODE

## BOILERS—*continued*

### GAS

No.	CODE WORD	No.	CODE WORD	No.	CODE WORD	No.	CODE WORD
1-GB-2	Guano	2-GB-6	Guilder	3-GBA-10	Gullet	3-GBA-80	Guzzle
1-GB-3	Guarish	2-GB-7	Guinea	3-GBA-11	Gulosity	3-GBA-90	Gunwale
1-GB-4	Gubbins	3-GBA-5	Guipure	3-GBA-12	Gumbo	3-GBA-100	Gurgle
1-GB-5	Gudgeon	3-GBA-6	Guisard	3-GBA-13	Gumption	3-GBA-110	Gurnet
1-GB-6	Guerdon	3-GBA-7	Guitar	3-GBA-50	Gunboat	3-GBA-120	Gusher
1-GB-7	Guffaw	3-GBA-8	Guyrope	3-GBA-60	Gunsmith	3-GBA-130	Guttural
2-GB-5	Guidon	3-GBA-9	Gulch	3-GBA-70	Gunnage		

### BRITANNIA

No.	CODE WORD	No.	CODE WORD	No.	CODE WORD	No.	CODE WORD
03K	Bream	16K	Brigand	29K	Brawler	47K	Brunette
04K	Breaker	17K	Brimstone	35K	Broacher	48K	Brutally
05K	Breezy	18K	Brisket	36K	Broadcast	49K	Bubbler
06K	Brethren	24K	Brachial	37K	Brocade	410K	Buccaneer
07K	Brevet	25K	Bradawl	38K	Brogue	411K	Buckbean
08K	Brewhouse	26K	Braggart	39K	Broker	412K	Bucolic
14K	Brickbat	27K	Bramble	310K	Browbound	413K	Budget
15K	Bridoon	28K	Brasier	311K	Brownie	414K	Buffalo

To indicate Boilers for Oil Burning, add the word "Oil" to above code; thus No. 28KO will be "Brasier Oil"; No. 35KO, "Broacher Oil," etc.

To indicate Nos. 0K and 1K Series with Front Smokehood, add the word "Front" to above code; thus No. 03KF will be "Bream Front"; No. 14KF "Brickbat Front," etc.

### 6 "R" SERIES

NO.	CODE WORD	NO.	CODE WORD	NO.	CODE WORD
6-R-7	.. Pacifier	6-R-10	.. Paddle	6-R-13	.. Pagoda
6-R-8	.. Package	6-R-11	.. Paddock	†6-R-14	.. Paigle
6-R-9	.. Packman	6-R-12	.. Pagan	†6-R-15	.. Painful

† For oil-firing. To indicate other sizes for Oil Burning add the word "Oil" to code word; thus No. 6-RO-9 will be "Packman Oil"; No. 6-RO-12 "Pagan Oil," etc.

When required for Mechanical Stoker, add the word "Stoker" to code word; thus No. 6-RS-9 will be "Packman Stoker," etc.

### "H" SERIES

No.	CODE WORD	No.	CODE WORD	No.	CODE WORD	No.	CODE WORD
1-HN-4	Habeas	2-HN-8	Hanaper	3-HN-9	Harridan	4-HN-10	Hearsay
1-HN-5	Habitable	2-HN-9	Handbill	3-HN-10	Harrower	4-HN-11	Heartburn
1-HN-6	Hackle	2-HN-10	Harangue	3-HN-11	Harvester	4-HN-12	Heathen
1-HN-7	Haggard	2-HN-11	Harbinger	3-HN-12	Hassock	4-HN-13	Hebrew
1-HN-8	Haily	2-HN-60	Harbour	3-HN-80	Hatchel	4-HN-14	Hecatomb
1-HN-40	Hariness	2-HN-70	Hardihood	3-HN-90	Haughty	4-HN-80	Heckler
1-HN-50	Halberd	2-HN-80	Harebell	3-HN-100	Hautboy	4-HN-90	Hedgehog
1-HN-60	Halcyon	2-HN-90	Haricot	3-HN-110	Hawthorn	4-HN-100	Heifer
1-HN-70	Haler	2-HN-100	Harmful	3-HN-120	Haymaker	4-HN-110	Heirloom
1-HN-80	Halliard	2-HN-110	Harmonic	4-HN-8	Headdress	4-HN-120	Hellenic
2-HN-6	Hamate	3-HN-8	Harpooner	4-HN-9	Healer	4-HN-130	Helmet
2-HN-7	Hamstring					4-HN-140	Helpmate

To indicate Boilers for Oil Burning, add the word "Oil" to above code; thus No. 1-HO-8 will be "Haily Oil"; No. 2-HO-90, "Haricot Oil," etc.

## TELEGRAPH CODE

## BOILERS—continued

## MAGAZINE

No.	CODE WORD	No.	CODE WORD	No.	CODE WORD	No.	CODE WORD
25-M	Shabrack	260-M	Shark	37-M	Shelter	360-M	Shilling
26-M	Shakle	270-M	Shatter	38-M	Shepherd	370-M	Shimmer
27-M	Shadow	280-M	Shawn	39-M	Sheraton	380-M	Shingle
28-M	Shagreen	290-M	Sheath	310-M	Sherbert	390-M	Shipmate
29-M	Shalloon	2100-M	Shebang	311-M	Sheriff	3100-M	Shippon
210-M	Shambles	2110-M	Sheepish	312-M	Shetland	3110-M	Shipwreck
211-M	Shampoo	35-M	Sheldrake	313-M	Shield	3120-M	Shirker
250-M	Shamrock	36-M	Shellac	350-M	Shiftless	3130-M	Shiver

## MISCELLANEOUS

Boiler Header (No.) .. .. .	Topic
Bower-barffed Firepot .. .. .	Trembling
Cleaning Chisel .. .. .	Treeless
Gas Poker .. .. .	Trumpery
Grate Bars, Grill pattern, for (No. of Boiler) .. .. .	Towline
Ideal Damper Regulator, No. 802 .. .. .	Towpath
„ „ „ No. 905 .. .. .	Trisect
Insulating Galvanised Steel Jacket .. .. .	Tourmalin
Nickel-plated Top .. .. .	Trismus
Rack for Stoking Tools .. .. .	Tonsure
Section, Back for (Boiler No.) .. .. .	Toleration
„ Front „ „ „ .. .. .	Tomahawk
„ Left-hand half back for (Boiler No.) .. .. .	Trigger
„ „ front „ „ .. .. .	Trident
„ Right-hand half back „ „ .. .. .	Trigamy
„ „ front „ „ .. .. .	Trickery
„ Middle for (Boiler No.) .. .. .	Tombic
„ Half Middle „ .. .. .	Trilobate
„ Connecting „ .. .. .	Tombola
„ Half Connecting „ .. .. .	Trinket
„ with Top Fire Door Opening (for Boiler No.) .. .. .	Tortoise
Set of Regular Mountings for (No. of Steam Boiler) .. .. .	Toothless
Shaking Grate for (No. of Domestic Boiler) .. .. .	Tropical
Side Jackets, enamelled (No. of Domestic Boiler) .. .. .	Truncheon
Stoking Tools for (No. of Boiler) .. .. .	Toaster
Summer Grate .. .. .	Truncate
Vitreous Enamel finish Mottled (state colour) .. .. .	Truant
„ Cream .. .. .	Trundle
With „ Back „ Horizontal Smoke Outlet .. .. .	Trump
„ „ Vertical „ „ .. .. .	Trunk
„ Back Smokehood .. .. .	Triton
„ Front Smokehood .. .. .	Thrilling
„ Top Smoke Outlet .. .. .	Triumph
Without Draw-off Cock(s) .. .. .	Torus
„ Insulating Galvanised Steel Jacket .. .. .	Toryism
„ Mountings .. .. .	Topful
„ Stoking Tools .. .. .	Tongueless
„ Grate Bars .. .. .	Trombone
Wrench No. 9, for assembling Ideal Sectional Boilers .. .. .	Trooper

## INCHES

INS.	CODE WORD	INS.	CODE WORD	INS.	CODE WORD	INS.	CODE WORD
1 $\frac{1}{2}$ ..	Inattentive	1 ..	Inaudible	3 ..	Irradiate	6 ..	Isolated
1 ..	Inactive	1 $\frac{1}{2}$ ..	Inbreeds	3 $\frac{1}{2}$ ..	Irrigate	7 ..	Isthmus
1 ..	Inability	1 $\frac{1}{2}$ ..	Incarnate	4 ..	Irruption	8 ..	Itinerant
1 $\frac{1}{2}$ ..	Inaction	2 ..	Irksome	4 $\frac{1}{2}$ ..	Ivied	10 ..	Iambic
1 ..	Inanity	2 $\frac{1}{2}$ ..	Ironical	5 ..	Islands	12 ..	Iceiness





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PLEASE QUOTE

IDEAL WORKS,

HULL, Yorks.

January, 1938.

Dear Sir(s),

We have much pleasure in sending you herewith a copy of our new General Catalogue, and the particular items to which we would draw your attention are as follows:-

Pages 40/1	Ideal Electric Radiators.
Page 42	Ideal Indirect Radiator Heater For Neo-Classic Radiators.
Page 47	Ideal Marine Radiators - Deck pattern withdrawn, only Bulkhead pattern now available.
Pages 74/5	Diagrams and dimensions for boiler foundations and ashpits.
Pages 76/7	Illustrations and notes re Ideal Sectional Boilers for Mechanical Stoking.
Pages 78/9	Ideal Domestic Gas Boilers Nos. 1-DG and 2-DG for direct hot water supply.
Pages 114/5	Re-arrangement of the large Ideal Gas Boiler, now known as the 3-GBA series, providing increased output and also an eight section size.
Pages 138/141	The new No. 6-R Series Ideal Sectional Water Boilers, suitable for hand-firing, mechanical stokers and oil burning.
Pages 144/5	The No. 3 Magazine Boiler now arranged with the fuel magazine on the outside instead of in the centre.
Pages 172/3	Thermostatic Damper Controls now available for Ideal Magazine Boilers.
Pages 194/202	Ideal Full-Way Copper Fittings.

Yours very truly,

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